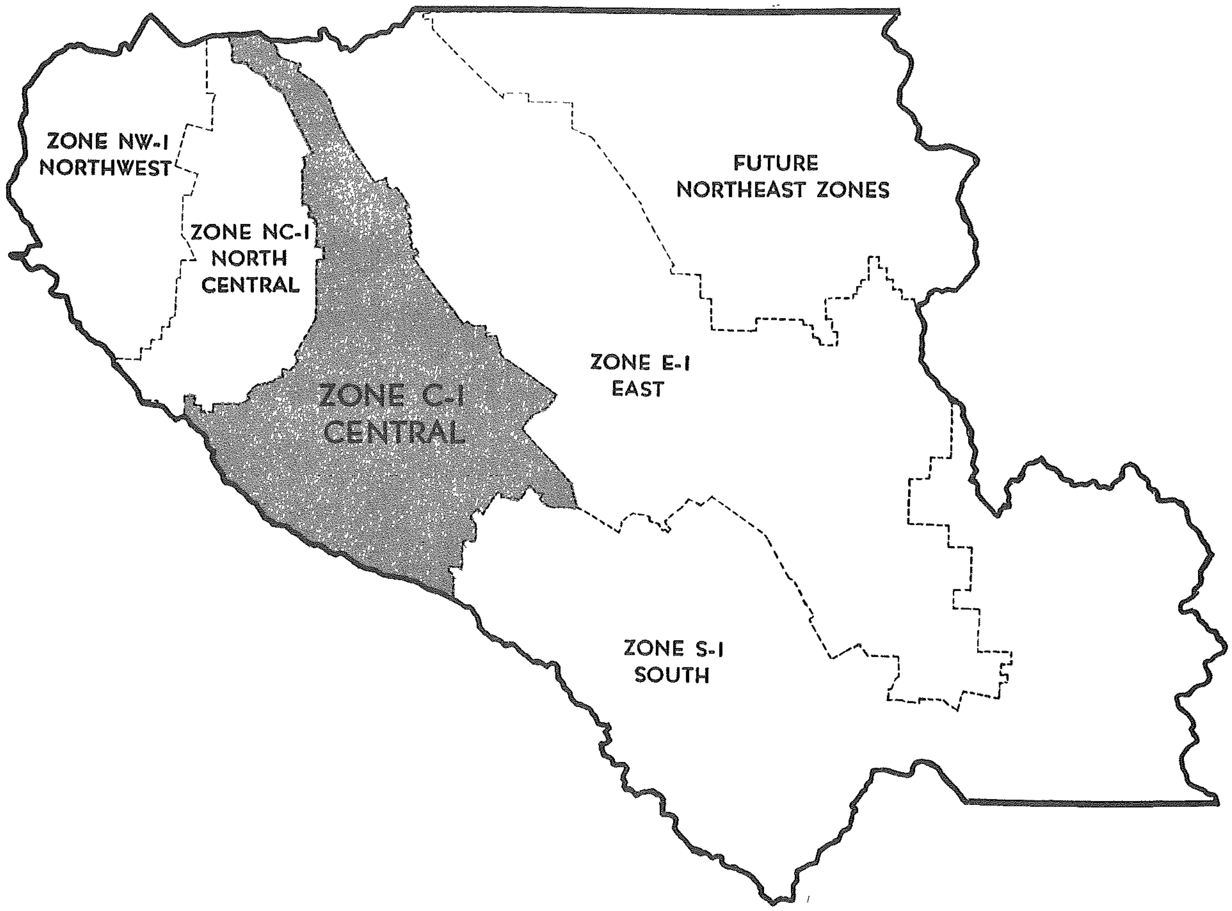
SANTA CLARA COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT



ENGINEER'S REPORT OF PROPOSED IMPROVEMENTS FOR ZONE C-1, THE CENTRAL ZONE.

AUGUST 1960

ENGINEERS' REPORT

PROPOSED IMPROVEMENTS FOR ZONE C-1

PROJECTS 3, 7 AND 8

SANTA CLARA COUNTY FLOOD CONTROL

AND

WATER CONSERVATION DISTRICT

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SANTA CLARA COUNTY FLOOD CONTROL
AND
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GEORGE H. PRIME
SUPERVISING ENGINEER

August 1960

The Honorable Board of Supervisors
County of Santa Clara
20 West Rosa Street
San Jose, California

Gentlemen:

Transmitted herewith is the Engineer's Report on Proposed Improvements for Zone C-1 (Central) of the Santa Clara County Flood Control and Water Conservation District. This report includes three major projects on three streams. These streams are the Guadalupe River, Los Gatos Creek, and Canoas Creek and the recommended works consist of a total of 34.7 miles of channel improvements. The estimated total cost of these flood control facilities is $12,750,000 and it is believed that a bond issue in this amount can be financed by a maximum Zone tax rate of 20 cents per $100 of assessed value including estimated costs of other necessary Zone expenses. Such a maximum tax rate represents a decrease in the tax rate currently being levied in the Zone.

It is recommended that your Honorable Board hold a public hearing on these proposed improvements as required by law.

Very truly yours,

James B. Enochs

JAMES B. ENOCHS
Director of Public Works

JBE:fs

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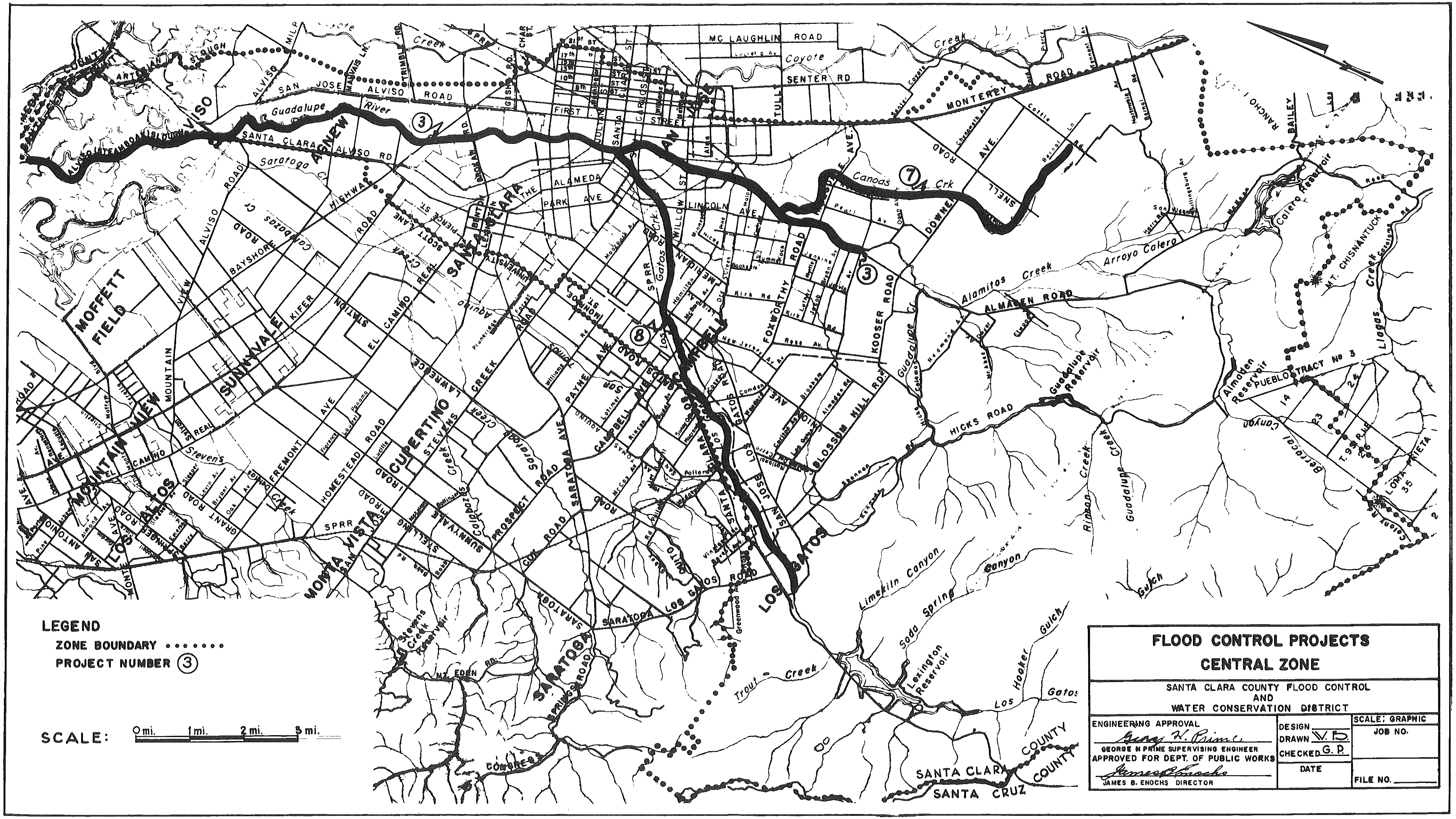


FLOOD CONTROL PROJECTS
CENTRAL ZONE

SANTA CLARA COUNTY FLOOD CONTROL
AND
WATER CONSERVATION DISTRICT

ENGINEERING APPROVAL Geo. H. Prime GEORGE H PRIME SUPERVISING ENGINEER	DESIGN ____ DRAWN V. B. CHECKED G. P.	SCALE; GRAPHIC JOB NO.
APPROVED FOR DEPT. OF PUBLIC WORKS James B. Enochs JAMES B. ENOCHS DIRECTOR	DATE	FILE NO. ____

INTRODUCTION

The following report recommends improvements to three streams, namely, the Guadalupe River and the Los Gatos and Canoas Creeks in Zone C-1 (hereinafter called the Central Zone) of the Santa Clara County Flood Control and Water Conservation District, which are presently causing heavy damage from flooding or erosion, and are retarding the orderly development of the Zone. The report discusses the problems connected with the flood control program of the Central Zone and shows how it can be accomplished at an annual tax rate of 20 cents per $100 of assessed valuation--a reduction of at least 5¢ from the current rate for the fiscal year 1960-61. The report (comprising this document and the maps and general construction plans attached hereto) shows:

1. A general description of the work proposed to be done, together with general plans, profiles, cross sections and general specifications relating thereto, on each project constituting the improvement.

2. A general description of the land, rights of way, easements and property proposed to be taken, acquired or injured in carrying out said work.

3. Maps which show the location of each of said projects constituting the improvement and land, rights of way, easements and property to be taken, acquired or injured in carrying out said work, and any information in regard to the same that is deemed necessary or useful.

4. An estimate of the cost of the improvement in Zone C-1 and each of the projects constituting the improvement, which includes an estimate of the cost of land, rights of way, easements and property proposed to be taken, acquired or injured in carrying out said improvement, and also of all incidental expenses likely to be incurred in connection therewith, including legal, clerical, engineering, superintendence, inspection, printing and advertising, and the total amount of bonds necessary to be issued to pay for the same.

THE NATURE OF THE FLOOD CONTROL PROBLEM

Stated in its simplest terms, the flood control problem consists of transporting run-off from mountainous terrain where, during times of rain, water falls in greatest abundance, to the bay or ocean, in such a manner as to cause no damage or a minimum of damage en route. At the outset, it should be clearly understood that a flood control or flood protection program should not be construed as a panacea which will insure against all flooding. Storms vary in amount of rainfall, duration, and intensity of rainfall. Storms are sent to us by nature with little or no advance warning. They vary in size from the meager rain experienced in Santa Clara County in the winters of 1956-57 and 1958-59 to the destructive type of storm experienced during the "Christmas Flood" of 1955 and April of 1958. It seems certain that no matter how much flood protection is given to any area, there is a probability that some day a storm will occur that exceeds the capacity of the works to be built. There are, however, well-accepted criteria which serve as a desirable guide in determining the amount of protection to be provided by the public agency when establishing a flood control or flood protection program. Storms are generally referred to as ten-year storms, twenty-year storms, fifty-year storms, one-hundred-year storms, etc. These designations have reference to the frequency with which storms of certain intensities occur. Thus, a 100-year storm is one which, it is estimated, will be exceeded on the average frequency of once every 100 years. A 50-year storm is estimated to occur on an average of once every 50 years. The designations refer to estimated times of recurrence, and are not to be confused with the relative sizes of the storm. Thus, a 100-year storm is not twice as big as a 50-year storm. In general, a 50-year storm is approximately 9/10ths the magnitude of a 100-year storm in this area.

A flood control program which provides protection against storms occurring on an average frequency of 50 or 100 years has been accepted by the engineering profession to be a reasonable degree of protection at a reasonable cost. If we assume that all flood protection works have been established to accommodate a 50- or 100-year storm and a storm of greater frequency occurs, there would, of course, be some flooding; but in that event the amount of flooding would be of minor consequence, would cause little damage, and expenditure of funds to protect against the amount of damage caused would not be warranted. The protective works shown on the plans accompanying this report have been designed in accordance with these general principles.

PROBLEMS CONNECTED WITH FLOOD CONTROL

In general, it can be stated that the residential, commercial and industrial development will significantly increase the run-off as compared to the same area of ground in its natural condition.

The rapid urban, commercial and industrial growth of Santa Clara County, which we are presently experiencing, is one of the most important contributing factors to the flood control problem. While land is in its natural condition, or has been cultivated into orchards, it will absorb a substantial quantity of rainfall. Even after such ground has become saturated with rain and can no longer absorb water, the rate at which the resulting run-off finds its way into a flood control channel is relatively slow. The flood water flows across orchards and meadows and the cultivated ground or the grass of a meadow has a tendency to slow up the rate of speed at which the water is travelling. As urbanization occurs, the contrary is true. Instead of open land to absorb the water, the change in land use provides rooftops, driveways, streets, commercial areas, parking lots and other areas that become relatively impervious, and the land can no longer absorb as much rainfall. Urban developments are usually designed so that the flood waters quickly drain off the property into the public streets and thence into storm drainage facilities. Storm drains, unlike cultivated orchards or meadows, transmit the water to the nearest flood control channel at the fastest rate of speed compatible with good engineering design.

In discussing main flood control channels, it is common to compare them with the freeway system for handling of automobile traffic, since flood control channels are the main arterials for transporting water. In some respects they are easily compared. For instance, a bottleneck on a highway will cause a large backup of traffic. A channel bottleneck in the form of an undersized culvert, or a series of sharp curves, will also back up the water. However, here the similarity ends because as traffic backs up it slows down, but when water backs up it overflows the channel, causing flooding and damage. If a highway becomes congested, automobiles can leave the highways to take a side street, but when water leaves the main channel seeking its own "side street" it causes flooding and damage. Automobiles are controlled by the driver, but storms come with the speed at which nature sends them to us, and their speed cannot be controlled without the construction of proper protective works. Freeways can go uphill and downhill, whereas flood waters travel downhill only. Highways can be built in segments, with the realization and understanding that when the improved portion comes to an end, the smaller road will still be able to handle some of the traffic at a slower rate of speed without damage. This, of course, is not true in the case of flood control channels. They must be improved in the entire reach where the capacity is inadequate to give proper flood protection.

Aside from the usual problem of inadequate channel capacity, there are also the related problems of erosion, silting, tidal action and subsidence, all of which must be considered in every proper flood protection program. If we trace run-off from the hillside on its course to the bay, the following things are likely to occur: First, flood waters, like most natural substances, rush with greater speed downhill on a steeper grade. Therefore, when the rain falls in the mountains, the run-off rapidly traverses the steep hillside, washing away natural soils along with dust and silt that has gathered over the dry summer and fall months. Since it is travelling at a relatively fast rate of speed, it has a tendency to scour or erode. As the tributaries of a stream reach the main channel or outfall, a greater volume of water has gathered. Flood waters travelling at a high rate of speed in combination with volume create a greater force, which will continue to erode within the channel itself. This is particularly true where soils are loose or gravelly. These silts and gravels are carried downstream toward the floor of the valley. As the grade becomes flatter, the speed of the water slows down. Having lost its speed it has lost its ability to carry much of this silt and gravel, which is deposited in the bed of the stream in the flatter reaches of the course of the river. Similar deposits of silt and gravel occur at each obstruction, such as at culverts or sharp turns in the bed of the creek, which cause a reduction in its rate of speed. As the water approaches the bay, the problems of subsidence and tidal action are encountered. Although the floor of Santa Clara Valley is subsiding at a rapid rate at the south end of San Francisco Bay, the tides, of course, remain at a constant level (within their tide cycles). It is necessary, of course, to discharge the flood waters into the bay at a high as well as at a low tide safely.

METHODS OF CORRECTING EROSION

There are many methods of solving the erosion problem; all of which have advantages and disadvantages. In the Central Zone, the erosion problem does not become serious until the waters reach the channels themselves since the natural growth and grasses on the hillsides minimize serious erosion in those areas. One of the best methods of preventing erosion is to construct a reinforced concrete channel section. Concrete lining is an obvious method of preventing erosion and has the advantage of reducing maintenance costs in the future. The disadvantages are high cost and the elimination of any possibility of percolation within our stream beds. Another method is to use drop structures or check dams. As stated previously, flood waters run at a highly erosive rate of speed when the grade of the channel is quite steep. Drop structures or check dams have the effect of changing the grade of the stream bed by flattening the slope between structures with the structure itself acting as a spillway or waterfall within the stream channel. With the flatter slope between drop structures, erosion is limited to the areas at and near the drop structures which can be corrected by concrete lining or sack revetment immediately upstream and downstream from the drop structure. In some cases it is necessary to place drop structures in wholly concrete-lined channels due to the fact that the speed of the water will, in the absence of drop structures, be capable of damaging even the concrete lining.

It is sometimes thought desirable to straighten channels that have a winding course. However, when such a channel is straightened, such straightening will have the effect of increasing the slope of the channel, creating an erosion problem as a result. Therefore, in the absence of sharp turns which would cause bottlenecks, it is sometimes desirable to refrain from channel straightening and shortening.

After considering the above problems, the Board of Supervisors of the Santa Clara County Flood Control and Water Conservation District adopted the following policies in connection with construction of major flood control facilities:

1. Pending availability of funds for channel lining, unlined channels will be constructed.

2. When funds are available, lined channels are preferred over unlined channels, and lining will be provided except in those areas where lining would adversely affect the percolation of water.

3. Drop structures are preferred over lining to control velocity and erosion.

4. In channel reaches containing possible erosive velocities (i.e., where the velocity is in excess of 6 feet per second), but having reasonable alignment and adequate cross section, the natural alignment of the water course is preferred over channel realignment.

METHODS FOR CORRECTING THE SILTING PROBLEM

Proper erosion control as outlined above will prevent a major portion of the silting of the channels in the downstream portions. However, it is impossible to prevent completely channel silting. The only feasible method to maintain proper channel capacity is to remove the silt at periodic intervals. In most cases this will be accomplished by the maintenance forces of the Department of Public Works of the County of Santa Clara, and, in other cases, by the use of rented equipment obtained from private contractors.

THE SOLUTION TO THE SUBSIDENCE AND TIDAL PROBLEMS

The ideal solution to the tidal problem would be a South Bay barrier, such as the proposed barrier across the Dumbarton Straits, which would control the level of the water in the southern part of San Francisco Bay. If such a barrier were to be built, the tide level could be controlled at a more constant height, which would allow a freer flow of flood waters into the bay without interference from excessively high tides. However, the South Bay barrier is a problem that cannot, because of its magnitude, be solved or constructed by the Santa Clara County Flood Control and Water Conservation District. It should be either a State program, a Corps of Engineers program, or, at its most local level, a program which will require the cooperation of

Alameda, San Mateo and Santa Clara Counties. The pressing need for proper flood control works within Santa Clara County precludes waiting for the construction of a South Bay barrier. It therefore becomes necessary to construct levees in the lower reaches which will be sufficiently high so that a peak flood can be carried within the levees if such flood occurs during a time of high tide.

The higher a levee is constructed, the broader its base must be. Therefore, in a proper flood protection program wherein the problems of tidal action and subsidence are encountered, as they are in Santa Clara County, it is necessary to acquire sufficient rights of way so that levees can be raised in the future to equalize the amount of subsidence; the wider rights of way being necessary to accommodate the broader bases of the future higher levees.

OTHER BASIC CONSIDERATIONS

In addition to the problems of channel capacity, erosion, subsidence and the tidal problem, there are other basic problems which must be kept in mind. These problems consist of channel depths, alignment, access for maintenance, severance damage caused to property owners, etc. Therefore, in developing a program which will provide proper flood control and drainage for a watershed, channel improvements for the main channels are planned with the following factors in mind:

1. Provide a waterway which will minimize erosion and be of adequate capacity to carry the run-off from fully developed land on the valley floor receiving precipitation from a storm estimated to occur on an average of once every 50 years; and to provide, where possible, an additional safety factor (freeboard) which will increase capacity to that of a 100-year frequency storm. Canoas Creek does not quite conform to these criteria due to economics of this watershed.

2. Final alignment and capacity to fit the future development pattern of the area, and also to cause a minimum of property severance along the route of the stream. The lands, rights of way and easements, and property which will be injured or required to provide for the channels, conduits, levees and access will be of widths specified and shown on the accompanying plans.

3. Provide a means of ready access to the channel so that emergency and maintenance crews can take care of any exigency.

4. Design improvements within the economic limits reached when initial construction costs are balanced against future anticipated maintenance expense.

5. Provide channels of sufficient depth to accommodate future storm drains from remote areas of the basin.

6. Provide fencing where necessary to give adequate protection to the public.

7. To perform all work in accordance with acceptable construction practices and therefore general specifications for all excavation, pipe, reinforced concrete structures and miscellaneous construction shall be according to Santa Clara County standards and the provisions of the "Standard Specifications of the State of California, Department of Public Works, Division of Highways."

THE SPECIFIC PROGRAM FOR ZONE C-1, THE CENTRAL ZONE

A. General Information

The Central Zone consists of the Guadalupe River and its tributaries. It includes all or major portions of the cities of San Jose, Santa Clara, Los Gatos, Alviso, Campbell and Monte Sereno. It has an area of approximately 154 square miles. The main tributary of the Guadalupe River is the Los Gatos Creek, which has its source high in the Santa Cruz Mountains and contains 40 square miles of mountain drainage area. It flows in a general northeasterly direction to its junction with the Guadalupe at San Jose, just north of Santa Clara Street. The Alamitos Creek and its tributary, the Calera Creek, constitutes the second largest tributary of the Guadalupe. The Alamitos Creek has its source in the Santa Cruz Mountains south of Almaden and has 35 square miles of mountain drainage area. It flows in a northwesterly direction to a junction with the Guadalupe River at Coleman Road. Another important tributary is the Guadalupe Creek which also has its source in the Santa Cruz Mountains. It has 12-1/2 square miles of mountain drainage area and flows in a northeasterly direction to a junction with Alamitos Creek and the Guadalupe River at Coleman Road. Other major tributaries are the Capitancillos Creek in the Almaden area; the Canoas Creek watershed, which drains water from the vicinity of the IBM plant on Monterey Road to the Guadalupe near Curtner Avenue; and, Ross Creek, which drains waters from the Los Gatos area into the Guadalupe River near Branham Lane.

From the junction of the Alamitos Creek and Guadalupe Creek, the Guadalupe River flows northeasterly to the town of Alviso and drains into Alviso Slough and thence into San Francisco Bay. The drainage area at San Jose, which includes the drainage areas of all the aforementioned tributaries, is about 131 square miles of mountainous and gently sloping land. There are about 12 square miles of valley land from San Jose to Alviso.

B. Rainfall, Run-off and Flooding

For as many years as the history of Santa Clara County has been recorded, there have been floods or threats of serious flooding from the Guadalupe River system due to high water in the Guadalupe and its tributaries.

The mountain range containing the headwaters of the Guadalupe, Los Gatos, Llagas and Uvas watersheds has the heaviest annual rainfall in the County. It varies from 30 to 75 inches per season, and has frequent storms of from 6 to 9 inches for a 24-hour period, according to a report of the Corps of Engineers published in 1944. The floods of 1889-90 and 1911 inundated the present downtown section of San Jose with several feet of water. The town of Alviso was flooded in 1940, 1952, 1955, and 1958. The town and adjacent area had to be evacuated in 1955 and 1958 at considerable expense, and property damage was extensive. If the floods of 1889-90 and 1911 were to occur today, damage would be much greater than in 1955 and 1958, for such storms would inundate the downtown part of the City of San Jose and would flood many of the basements of the downtown commercial areas which contain large inventories of saleable goods.

C. Criteria for Design

The Corps of Engineers' present estimate of the upper limit to which protective works should be designed in the reaches of the Guadalupe River downstream from its junction with the Los Gatos Creek is 25,000 c.f.s. The expected peak flood flow in the Guadalupe above its confluence with Los Gatos Creek just south of Santa Clara Street in San Jose is estimated at 13,000 c.f.s. and the Los Gatos Creek flow at 12,000 c.f.s. The Santa Clara County Flood Control and Water Conservation District and the Division of Highways, State of California have been cooperating with the U.S. Corps of Engineers in order to solve the many problems connected with the Guadalupe River watershed. It has been decided by these three bodies that a two-stage approach would be feasible and desirable on the Guadalupe River as well as the Los Gatos Creek. It should be stated, however, that this method is not the only feasible means of constructing the improvements. Under the two-stage approach, the first phase design flow of the Guadalupe River north of its confluence with the Los Gatos Creek will be 12,000 c.f.s. The Guadalupe upstream from its confluence with the Los Gatos Creek will be 7,000 c.f.s. capacity and the Los Gatos Creek itself will be 6,000 c.f.s.

D. Advantages of The Two-Stage Approach

Measured flows in the Guadalupe River at San Augustine Street in the floods of 1955 and 1958 have not exceeded 9,500 c.f.s. By constructing the first phase of the Guadalupe River north of its confluence with the Los Gatos Creek to a capacity of 12,000 c.f.s. plus 3 feet of unused freeboard between the levees, the channel could, if running brimful, carry in excess of 15,000 c.f.s. --an increase of more than 50% over the highest recorded flow. By using the two-stage approach, the program can be easily financed (as shown in a later section of this report), and at the same time provide adequate flood protection for many years to come.

The Guadalupe River is an authorized study project of the Corps of Engineers, U.S. Army. However, it is anticipated that construction of the Guadalupe River project by the Corps of Engineers could not be commenced prior to 1970 at the very earliest. It seems reasonable to expect the Federal Government to show greater interest in a project when there has been a substantial contribution to the project by the residents of the local area involved. It is a possibility, therefore, that Federal funds might become available and that the second phase of construction would be handled by the Corps of Engineers. The most expensive part of a channel improvement for flood control consists of replacing bridges and channel lining. With the exception of a new highway bridge on the Santa Clara-Alviso Road, a new railroad bridge adjacent to the Santa Clara-Alviso Road, and the extension of the existing Montague Road bridge (which in the initial construction will be built so that they may be capable of carrying the full flood flow of 25,000 c.f.s.), all bridges and culverts on the Guadalupe River are capable of carrying 12,000 c.f.s. and Los Gatos Creek bridges are capable of carrying 6,000 c.f.s. However, in order to construct a channel for the full flood flow of 25,000 c.f.s. on the Guadalupe and 12,000 c.f.s. on the Los Gatos, 20 bridges will have to be replaced and approximately 31,000 lineal feet of channel lining would have to be installed. The estimated cost of replacing such bridges and installing such lining is in excess of $12,000,000.00. The lining and replacement of the 20 bridges and other necessary work would be done under the second phase of construction which could possibly be financed under the Federal program.

Once local interest is shown by construction of the first phase of the project, a vigorous approach to the Federal Government should be made so that the project may be completed with Federal financial aid when the full capacity becomes necessary.

Under the two-stage approach, first-phase capacity can be accomplished chiefly by channel excavation and planting of protective grasses to control erosion in those areas where channel lining will become an ultimate necessity. Channel excavation is the least expensive part of a flood control program. The bridges other than those specifically named above will not have to be replaced, although they will have to be improved in order to meet the first-phase capacity. Bridge and culvert capacity can be increased by lining the sides and bottoms of the channels underneath the bridges either with concrete slabs or concrete sack revetment and by reducing turbulence immediately upstream and downstream from the bridges. Turbulence is reduced by constructing controlled transitions from the natural channel section into and out of the bridge structure. These are commonly called warped wingwalls. Drop structures on the Guadalupe River can be constructed to carry the required flood flow of 12,000 c.f.s. under the first phase of construction and can be designed in such a way that they can be enlarged and extended to the ultimate flow of 25,000 c.f.s. when such is needed.

By not going to full stage construction at this time, the cost of channel lining and much bridge replacement is eliminated for the present. No waste will occur on ultimate development because no lining would have to be removed and drop structures can merely be extended. Even if there were no possibility of obtaining Federal aid on the second stage of construction, the two-stage approach has the double advantage of holding present-day costs to a minimum as well as spreading out the cost of lining and future bridge replacements over the future years. If Federal aid is not forthcoming, the two-stage approach will place an equitable part of the burden on future taxpayers who will create the need for increased channel capacity by their increased building and other types of developments. It is these future taxpayers who will not only create the need for, but will get the benefits of, the larger full-flow channel.

The plans accompanying this report have been designed to incorporate all the criteria of the Corps of Engineers and show two-stage construction on the Guadalupe River, two-stage construction with the exception of drop structures on the Los Gatos Creek, and one-stage full flow construction on the Canoas Creek. Under any Federally-financed program for channel improvements by the Corps of Engineers, the local agency is required to provide lands, easements and rights of way. Therefore, ultimate right of way will be acquired and the accompanying plans show this condition on all creeks.

THE GUADALUPE RIVER

The total length of the Guadalupe River Improvement, as shown on the accompanying plans, is 18.0 miles. Its lower terminus is San Francisco Bay; its upper terminus is Branham Lane. For purposes of description, the Guadalupe River has been divided into seven reaches.

REACH #1. From San Francisco Bay to State Route 113 (Highway 9) at Alviso. This reach is 4.80 miles in length from San Francisco Bay. For 2.8 miles it will be dredged to sufficient capacity upstream in the Alviso Slough between the existing salt pond levees of the Leslie Salt Company. The present alignment will be maintained with levees built up to contain all water therein. For the next 1.6 miles, the slough will be realigned and new levees constructed. Bulkhead lines will also be established as shown on the plans. However, bulkheads will not be constructed by the District. They are shown on the plans as a convenience to those interested parties owning adjacent land who may wish to construct bulkheads for their own use. For the next .4 mile, between the Santa Clara-Alviso Road and State Route 113 (Highway 9), the Guadalupe River will be realigned and excavated to sufficient capacity and new levees constructed. Levees in this area will be approximately 6 feet above existing ground level. The following new structures will be required: a new highway bridge at the Santa Clara-Alviso Road with the roadbed raised to a new elevation to meet the proposed bridge construction; a railroad bridge parallel to the Santa Clara-Alviso Road bridge, and an extension of the sanitary sewer siphon cradle running beneath the Guadalupe River. In addition, the existing State Highway Bridge on Route 113 will be discarded and a new bridge will be built.

REACH #2. From Route 113 to Montague Road. This reach is 2.34 miles in length and is a substantial realignment of the present channel. As shown on the plans, the ultimate channel location just north of Montague Road is on the east side of the Commercial Solvents plant. The alignment in this reach has already been presented to the Board of Supervisors. It was finally approved in August 1960. Any alignment changes during the construction design phase will be only to minimize right of way costs to the District should adjacent land use change in the interim. The channel will be excavated during first phase construction to provide a capacity 12,000 c.f.s. New levees will be constructed in their ultimate location and at their ultimate height. For erosion control, some rip-rap will be provided on the banks in critical locations. In non-critical locations, protective grasses will be planted on the inside of the channel levees. On the outside of the levees, weeds will be controlled by the use of ice plant or some other decorative planting. Fencing will not be installed in this reach in order to minimize interference with existing agricultural operations. Three high-pressure gas lines will be lowered to siphon under the channel, and the San Francisco Water Department's Hetch Hetchy water transmission aqueduct will also be constructed to pass under the channel. The Montague Road Bridge will be lengthened by adding one 50-foot span. Levee heights in this reach will vary from 6 feet above existing ground level at Route 113 to approximately 4 feet above existing ground level at Montague Road.

REACH #3. Montague Road to Bayshore Highway. This reach is 1.68 miles in length. In general, it will follow its present alignment, but there will be minor realignments in specific locations. Levees in this reach will be approximately 4 feet above existing ground level. Construction of the channel and levees, protective and decorative planting and fencing will be the same as described in Reach #2 above. A sanitary sewer has already been lowered just north of Bayshore Highway. Pursuant to a cooperative agreement with the State of California, the State Division of Highways is excavating the channel section in return for the right to remove earth therefrom for use in its program of widening the Bayshore Highway within Santa Clara County.

REACH #4. Bayshore Highway to State Route 5 near Hamline Street. This reach is 2.03 miles in length. In this reach channel construction and levee placement will be the same as in Reach #2 above. Levees will be kept at a minimum in this reach and will not exceed 4 feet above existing ground level. This reach parallels the proposed Guadalupe Freeway being constructed by the City of San Jose. Under cooperative agreements with the City of San Jose, the City will construct this reach in accordance with the general construction plans and engineering report filed with the Board of Supervisors on January 30, 1959. These plans and report were approved at a public hearing before the Board of Supervisors held on February 24, 1959 for Reaches 3 and 4. In Reach #4 the Brokaw Bridge is being reconstructed and a drop structure being installed immediately upstream. Six-foot high chain link fencing will be provided at public road crossings and in populated areas wherever necessary to give adequate protection to the public.

REACH #5. From State Route 5 to Santa Clara Street in San Jose. The length of this reach is 1.78 miles, including the confluence with the Los Gatos Creek. The alignment follows present river alignment very closely. With minor exceptions there will be no levees in this reach, all of the channel being below the surface of natural ground. This reach also will be excavated to accommodate a flow of 12,000 c.f.s. on a right of way sufficient to handle the future flood flow of 25,000 c.f.s. In this reach the channel will require lining to reach its ultimate capacity of 25,000 c.f.s. During the first phase of construction, erosion protection will be provided by protective planting at public road crossings and in areas where fencing is required to provide adequate safety, fencing will either be of 6-foot-high chain link fence or such a type that will match existing fences of the neighborhood.

Four drop structures are required in this reach (one included in the Los Gatos leg confluence). These structures will be designed so that they may be extended to full-flow capacity at a later date without replacement. As previously explained, these structures will reduce velocity to minimize scouring by flattening the grades of the channel between drop structures. There are seven highway bridges in this reach, namely, the bridges at Rosa-Hedding, Taylor, Hobson, Coleman, Julian, San Augustine, and Santa Clara Streets. Rip-rap or concrete paving will be placed under each bridge for protection of abutments and foundations, and warped wingwalls constructed of sacked rip-rap will be placed upstream and downstream from the bridges to decrease turbulence. There are four railroad bridges. A number of sanitary sewers, utility lines and other utilities will be lowered and storm sewer outlets reconstructed. Special construction will be called for at the confluence of the Los Gatos Creek and Guadalupe River to provide an efficient junction. Six-foot-high chain link fencing will be provided at public road crossings wherever necessary to give adequate protection to the public.

REACH #6. From Santa Clara Street to Malone Road. This reach is 2.78 miles in length and follows the present channel alignment very closely. As in Reach #5 there will be no levees, with minor exceptions; all of the channel being constructed below natural ground level. The channel will be constructed to its first phase capacity of 7,000 c.f.s. Erosion will be controlled by constructing four drop structures and one control structure at the Southern Pacific Railroad bridge near West Virginia Street. In addition thereto, there will be the planting of protective grasses on the side slopes of the channel. The drop structures, as explained above, will flatten the grades and control velocities to minimize scouring, with the protective planting to give added protection against erosion. Again the drop structures will be designed for expansion to the full flood flow design of 13,000 c.f.s. In order to provide the future flood flow of 13,000 c.f.s., it will be necessary to concrete line the channel from Santa Clara Street to Willow Street. There are nine bridges which will be rip-rapped through the waterways for protection of abutments and foundations, and warped wingwalls of sacked revetment will be provided upstream and downstream from each bridge. Bridges to be protected are the crossings at San Fernando, Park, Prevost, Auzerais, Grant, Virginia, Willow, Willow Glen Way and Alma Streets. A number of sanitary sewers, water lines and other utilities will require lowering and some storm sewer outlets will require reconstruction. At public road crossings and in areas where fencing is required to provide adequate safety, fencing will be either of six-foot-high chain link or of such a type that will match existing fences of the neighborhood.

REACH #7. From Malone Road to Branham Lane. This reach is 2.65 miles in length and follows the present river alignment very closely with some slight exceptions. The channel will be constructed and sides protected with planting as set forth in Reach #6 above, except that between the entrance of the Canoas Creek and Ross Creek, the channel will be designed to accommodate a flow of 5,500 c.f.s. and between Ross Creek and Branham Lane, will be constructed to accommodate a flow of 4,500 c.f.s. In this reach, one drop structure will be constructed and two bridges (at Malone Road and Curtner Street) will be lined with rip-rap and wingwalls provided. No sanitary sewers will require lowering but storm sewer outlets may need some reconstruction. In this reach the Guadalupe River runs parallel to and adjacent to Almaden Road. On the roadway side of the river, four-foot-high chain link fencing will be provided so that maintenance equipment can work over the top of the fence. On the other side of the river, six-foot-high chain link fencing or a type that will match existing fences of the neighborhood will be provided.

The estimated cost of improving the Guadalupe River as outlined above is $7,811,000.00. While the improvements to Reach #3 and Reach #4 described above are part of the Guadalupe River Improvement, only the cost of right of way for Reach #4 is included in the foregoing estimated cost, and the balance of the costs for the improvements in Reaches #3 and #4 is being paid for either from tax proceeds or is being contributed by the City of San Jose or the State of California.

THE LOS GATOS CREEK

As shown on the plans, the proposed improvements of the Los Gatos Creek run from its confluence with the Guadalupe River upstream to Saratoga Avenue in Los Gatos, a distance of 9.5 miles. For purposes of explanation, the Los Gatos Creek has been divided into two reaches:

REACH #1. From Santa Clara Street to Meridian Road. This reach is 2.2 miles in length and will follow the present alignment of the channel between present high banks except in cases where it will be necessary to eliminate abrupt right angle turns in the channel. The first phase of construction on the Los Gatos Creek is the provision of a channel having a capacity of 6,000 c.f.s. within a right of way established for an ultimate flow of 12,000 c.f.s. In this reach first-phase construction can be accomplished without channel lining, although in order to pass the full flood flow of 12,000 c.f.s., concrete lining will be needed in this reach. There are six drop structures required in this reach to control velocity. Due to the peculiar circumstances existing within the Los Gatos Creek, these will be designed to the ultimate capacity of 12,000 c.f.s. The steep sides of the existing Los Gatos Creek channel do not lend themselves to stage construction of the drop structures, and temporary protective works for the drop structures would be just as costly as installing the ultimate structure at the present time. However, to obtain the first-phase construction capacity of 6,000 c.f.s., six bridges, namely, those at San Fernando, Park, Montgomery, Auzerais, Lincoln and Meridian Streets, will be lined with rip-rap and warped wingwalls will be provided upstream and downstream from each bridge. Also, considerable rip-rap bank protection downstream from Lincoln Avenue will be necessary for proper erosion control. Concrete walls will be installed at their ultimate location to provide proper protection to the Southern Pacific Railroad bridge near San Carlos Street. In this reach a number of sanitary sewers, water lines and other public utilities will require lowering and some storm sewer outlets will require reconstruction. In those areas where rip-rap is not required for erosion control, channel banks will be planted with protective grasses. Fencing will be provided at public road crossings and wherever necessary to give adequate protection to the public.

REACH #2. From Meridian Road to Saratoga Avenue in Los Gatos. This reach is 7.1 miles in length. Generally speaking, this reach of the Los Gatos Creek now consists of a very wide river channel with adequate capacities to handle the flood flows. It contains four dams belonging to, or operated by, the Santa Clara Valley Water Conservation District, namely, Lower Page Dam, Upper Page Dam, Kirk Dam and Vasona Dam, and many spreading grounds used for percolation purposes. Warped wingwalls and channel lining will be provided through the bridges at the San Jose-Los Gatos Road, Hamilton Avenue, and the Route 5 bridge. A drop structure capable of carrying 12,000 c.f.s. will be constructed at Campbell Avenue, and sufficient bank protection from the San Jose-Los Gatos Road to the Route 5 bridge will be provided. This bank protection would be in the form of sacked concrete rip-rap or heavy boulders. Aside from these features, which will provide erosion control, no channel construction is necessary in this reach. However, private property owners are now filling the creek in order to regain useable land. In order to prevent encroachment into the stream bed to a degree where it would affect the full flood flow of 12,000 c.f.s., an official plan line for an earth channel will be established throughout the entire reach. No backfilling nor any structure will be allowed within the official plan line area without prior permission of the District.

The estimated cost of improving the Los Gatos Creek as outlined above is $3,239,000.00.

THE CANOAS CREEK

Plans accompanying this report show the Canoas Creek as a major drainage channel running from Cottle Avenue near the IBM plant to the confluence of the Canoas Creek and the Guadalupe River just north of Redbird Drive. These plans upstream to the vicinity of Snell Road were approved at a hearing held by the Board of Supervisors on March 9, 1959. As extended to Cottle Avenue, they are included as a part of this report to make this 7.2 mile channel improvement eligible for bond monies. The project is too large to be financed out of current revenues. Problems on the Canoas Creek in no way resemble flood problems on the Guadalupe River or Los Gatos Creek. The terrain of the Canoas Creek is extremely flat; there are no erosion problems. The two chief problems on the Canoas Creek are (a) lack of channel capacity, and, (b) heavy growth of tules in certain areas, which, in turn, create a maintenance problem if capacity is to be ensured. In addition, the water table in the upper reaches of the Canoas Creek is almost at ground level. Consequently, the Canoas Creek usually has some water standing in the bottom of it, and it is this standing water that promotes the heavy growth of tules. The terrain is so flat that, under the proposed program, the Canoas Creek will drop in elevation only 9/10ths of a foot for each 1,000 feet of channel length.

In order to correct these problems, the improvements proposed on the Canoas Creek are as follows:

(a) Channel deepening to a minimum depth of 9 feet.

(b) Channel widening to provide a bottom width of 8 feet at its upstream end and 12 feet wide at its lower end.

(c) Channel-bottom lining with reinforced concrete to prevent recurrent tule growth. This channel-bottom lining would have a flat V-shape so that water draining into the channel would be confined to the center of the lined bottom. Sides of the channel would be unlined to provide proper side drainage into the channel where the ground water problem exists.

Channel capacity for the proposed Canoas Creek improvement varies from 600 c.f.s. at its upper reach to 1,600 c.f.s. at its confluence with the Guadalupe River. This will allow sufficient capacity to receive winter flood flows from the Coyote-Alamitos Canal owned by the Santa Clara Valley Water Conservation District. In order to provide this capacity, it will be necessary to replace or construct bridge structures at Nightingale Drive, Narvais Road, Hillsdale Avenue, Downer Avenue, Blossom Avenue, and Snell Road. Farm bridges crossing the Canoas Creek will be replaced with structures equal to or better than existing structures. All existing fences will be replaced if necessary, and new fencing will be provided at bridge crossings and in populated areas so as to provide adequate protection to the public.

The estimated cost of improving Canoas Creek as outlined above, which is the ultimate improvement, is $1,700,000.00.

OTHER CONSTRUCTION PROJECTS

There are certain other construction projects required in the Central Zone to bring certain streams up to their required flood control capacity. These projects are not included as a portion of this report, nor are they shown on the plans. Examples of such projects are the improvement of Lone Hill Creek and Upper Ross Creek in the areas along the common boundary lines of the cities of San Jose and Los Gatos, and the construction of a channel parallel to Downer Avenue at its southerly end, which will receive winter flood flows from the Coyote-Alamitos Canal of the Santa Clara Valley Water Conservation District. As will be explained later, it will be necessary to finance the improvements of the Guadalupe, Los Gatos, and Canoas Creeks by the issuance of general obligation bonds. However, these other projects, such as the channel connecting Canoas Creek to the Coyote-Alamitos Canal, Upper Ross Creek, and Lone Hill Creek, are comparatively inexpensive and can be accomplished on a pay-as-you-go basis not requiring bonded indebtedness for the zone, thereby saving payment of bond interest charges. Hearings will be held from time to time on such other projects as the need arises for such improvements.

MAINTENANCE

Proper maintenance of all flood control facilities is of vital importance to any flood protection program. In addition to the silting problem explained in previous portions of this report, streams become clogged by natural growth within the channels, and the deposits of rubbish within the channels by those who do not have the proper consideration of the property rights of others or cost of channel maintenance. Such foreign substances are commonly known to all. They consist of lawn clippings, garbage, unwanted wood, unwanted bed springs, washing machines or any other forms of refuse that people will throw into a creek bed rather than transport it to a public dump.

In order to prevent such unauthorized action, the Board of Supervisors of the Santa Clara County Flood Control and Water Conservation District has adopted Ordinance No. 59-1, which makes it illegal to throw any refuse of any type or nature into a District-constructed or natural channel. Violators are subject to fine or imprisonment. By the terms of such ordinance, those private persons owning property that creeks run through are required to reasonably maintain them so that such creeks will not retard the flow of water. It is anticipated, however, that as the years go by the Santa Clara County Flood Control and Water Conservation District will acquire property rights in all such natural watercourses, and, when such rights are acquired, the District, being the owner of such stream channels, will maintain them. In addition to enforcing the abovementioned ordinance, channel maintenance is accomplished in one of the following ways:

(a) Silt removal.
(b) Snagging and clearing of tree and shrubbery growth within the channels.
(c) Clearance of debris.
(d) Erosion control to prevent silting.

Where the natural streams have adequate capacity and do not need construction projects, it is proposed that erosion be controlled by methods previously mentioned, i.e., sack revetment, deposit of heavy materials along the bank sides of the channels, planting of protective grasses, or, if necessary, the installation of drop structures. Natural growth would be controlled either by mechanical or manual removal as it occurs, or, where possible, the prevention of such growth would be accomplished by the use of chemicals or other herbicides. In the case of chemicals or herbicides, they will be used only after consultation with the County Agricultural Department so as to insure that no harm will come to adjoining properties. Silt removal will, of course, necessitate the periodic use of heavy equipment for removing or excavating the silt as the need occurs.

BENEFITS RESULTING FROM THE PROGRAM

The improvements proposed in the enclosed report would be of benefit to Zone C-1 in the following manner:

1. Public property, including city and county roads, public school property, state highways, Federally-owned property and other publicly-owned installations such as Agnews State Hospital, would be free from flood hazards and inundation such as experienced in 1955 and 1958.

2. Privately-owned property would receive the same benefits.

3. Development of presently undeveloped areas would no longer be curtailed. The proposed channels have been designed to carry increased run-off from the areas in which complete urbanization is anticipated, in addition to the run-off from undeveloped areas, during flood periods.

4. Economic benefits will result in the entire zone. By reducing or eliminating the threat of flood to lands presently subject to such hazards, the land becomes available for higher uses and the land value automatically increases. Land free from flood is attractive to industrial, commercial and residential developers. It is also more attractive to agricultural interests because the erosion and crop loss suffered in a major flood outweighs the benefits which may result from the deposit of silt on agricultural land. Present trends indicate that Santa Clara Valley will become one of the nation's great centers for residential, commercial and industrial activity which will, in turn, maintain employment and business activity resulting in a sound economy. The failure to provide adequate flood control will retard such orderly development. However, if given proper protection from floods, development will continue and the increase in assessed valuation created by the addition of structural improvements to land will be substantial. This will, as shown hereinafter, provide a tax base of sufficient volume to allow the work proposed in this report to be economically financed at an annual cost less than the taxpayers of the Central Zone are presently paying. An example of such benefits is reflected in the Ross Creek Watershed downstream from Camino Del Cerro. The serious flood problem in this area was eliminated by construction projects of the Santa Clara County Flood Control and Water Conservation District in 1955 and 1957. The area is now being improved into upper-class residential developments.

FINANCING OF THE PROGRAM

The total cost and amount of bonds needed to be issued for described construction works on the Guadalupe River, the Los Gatos Creek and the Canoas Creek is the sum of $12,750,000.00. This sum includes all such costs as right-of-way acquisition, engineering, legal, administrative and other incidental expenses. Improvement of the reaches of these creeks as shown on the accompanying plans must be accomplished in its entirety within as short a time as possible. Other natural streams are reasonably adequate for present day needs and can be kept in shape or improved through the maintenance program. As explained earlier, it is extremely difficult to "piecemeal" major improvements on a stream which creates erosion problems or has inadequate channel capacity. It is therefore proposed that the Guadalupe, Los Gatos, and Canoas Creek improvements as outlined on the accompanying plans be financed out of a general obligation bond issue of the Central Zone of the Santa Clara County Flood Control and Water Conservation District in the amount of $12,750,000.00; such bonds to be repaid over a period not to exceed 25 years for each series. It is estimated that the time of completion for all projects shown on the plans will require a construction period of at least 5 years. Therefore, it will not be necessary to sell all the bonds at one time. The sale of bonds should be apportioned in accordance with construction needs. The table set forth below shows the estimated amounts of bonds which could be sold if construction could be advanced to a four-year period of construction. Such a period of construction, although not realistic, serves as a conservative basis in estimating the probable tax levy required to retire the bonds in a 25-year period for each series. It also shows a conservative estimate of increasing assessed valuation within the Central Zone and points out that a maximum tax rate of 15¢ per $100 of assessed valuation is sufficient to provide ample funds for retirement of bonds and interest. From the fifth year to the twentieth year, the tax rate drops down from 12¢ to 7¢.

SALE & RETIREMENT OF CENTRAL ZONE BONDS

1960 - Sale of Series A for $5,500,000 - 25 yrs. @ est. 4% int.
1961 - Sale of Series B for $3,000,000 - 25 yrs. @ est. 4% int.
1962 - Sale of Series C for $2,250,000 - 25 yrs. @ est. 4% int.
1963 - Sale of Series D for $2,000,000 - 25 yrs. @ est. 4% int.

Fiscal Year	Estimated Annual % of Increase in Ass'd. Value	Est. Ass'd. Value of Lands & Improvements	Total Debt Service (Prin. & Int.)	Tax Rate per $100 Ass'd. Val.
1960-61	8	$ 370,760,000	$520,000,000	15¢
1961-62	8	400,420,000	528,000,000	15¢
1962-63	8	432,450,000	560,000,000	15¢
1963-64	8	467,040,000	684,000,000	15¢
1964-65	8	504,400,000	726,000,000	12¢

Table - continued

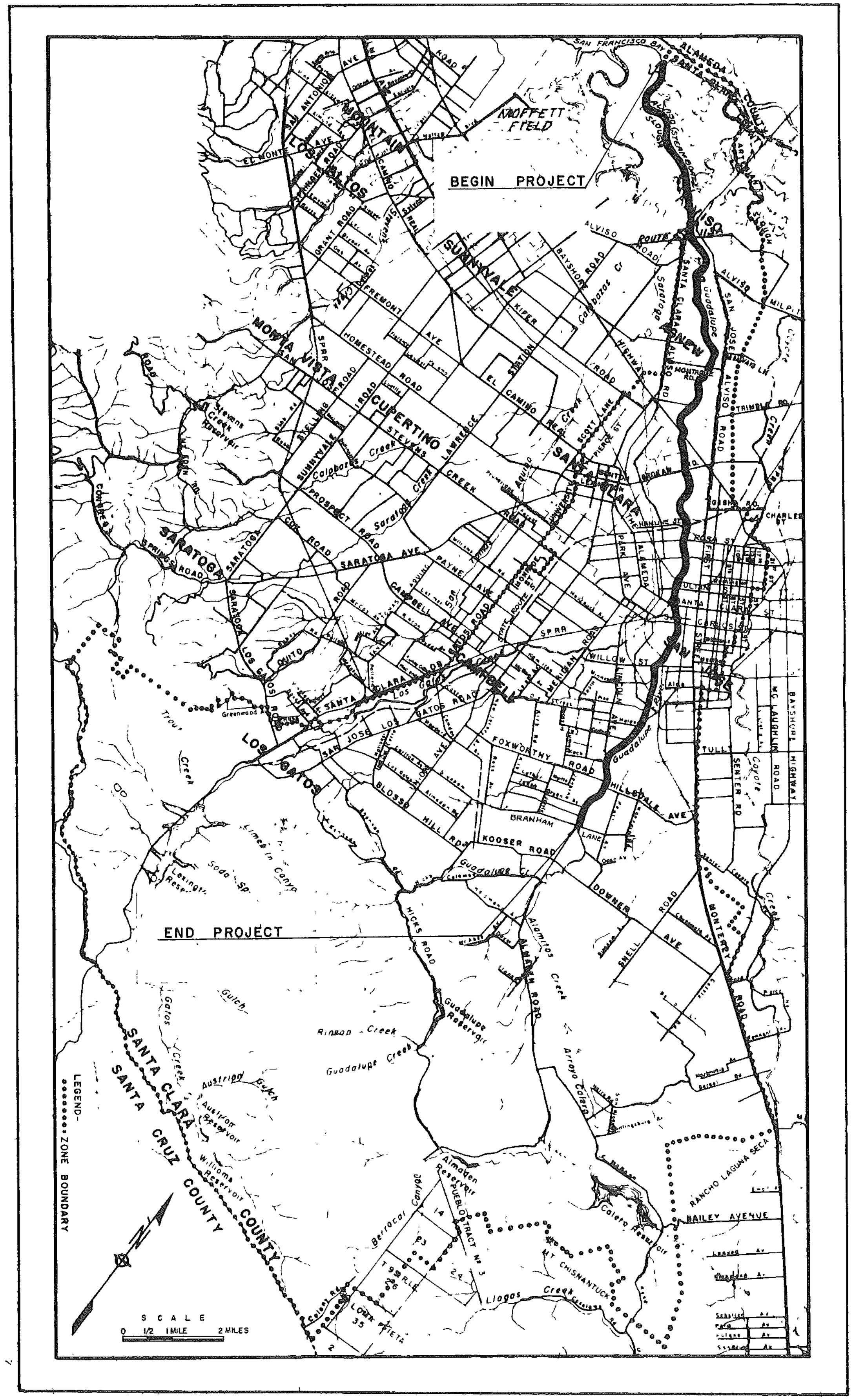
1965-66	7	$ 539,710,000	$761,000,000	12¢
1966-67	7	577,480,000	706,000,000	12¢
1967-68	7	617,900,000	746,000,000	12¢
1968-69	7	661,150,000	784,000,000	12¢
1969-70	7	707,430,000	820,000,000	12¢
1970-71	6	749,870,000	904,000,000	11.5¢
1971-72	6	794,860,000	886,000,000	11.2¢
1972-73	6	842,550,000	916,000,000	10.9¢
1973-74	6	893,100,000	967,000,000	10.8¢
1974-75	6	946,680,000	942,000,000	10¢
1975-76	5	994,010,000	942,000,000	9.5¢
1976-77	5	1,043,710,000	916,000,000	8.8¢
1977-78	5	1,095,890,000	890,000,000	8.2¢
1978-79	5	1,150,680,000	864,000,000	7.6¢
1979-80	5	1,208,210,000	838,000,000	7¢
1980-81	4	1,256,530,000	812,000,000	6.5¢
1981-82	4	1,306,790,000	786,000,000	6.1¢
1982-83	4	1,359,060,000	760,000,000	5.6¢
1983-84	4	1,413,420,000	734,000,000	5.2¢
1984-85	4	1,469,950,000	708,000,000	4.9¢
1985-86	3	1,514,040,000	457,000,000	3.1¢
1986-87	3	1,559,460,000	290,000,000	1.9¢
1987-88	3	1,606,240,000	104,000,000	.7¢

The tax shown above should be compared with tax rates now being paid in the Central Zone. Present tax rates now total 25¢ per $100 of assessed value, including taxes for District administration and maintenance. A 5¢ tax rate will be sufficient for administration, maintenance, and pay-as-you-go projects. Added to the bond tax shown above, the total tax rate--if bonds are voted--would be 20¢, decreasing in the fifth year and thereafter to lesser amounts--or a reduction of at least 5¢ from the current tax rate.

CONCLUSION

The provisions of this report show the proposed program to be one which will correct the existing flood problems of the Central Zone. The existing flooding within the zone is not only a constant menace, but, as shown by the financial analysis, it is entirely unnecessary.

With the information as to the economic feasibility of the flood control program for the Central Zone made available in this report, it is possible for all civic-minded individuals and organizations to advocate the passage of a bond issue in this zone and thus share its continued economic stability as well as the safety of life and property of Santa Clara Valley residents.



MAP

AND

GENERAL CONSTRUCTION PLANS

OF

ZONE C-I (CENTRAL) PROJECT NO. 3

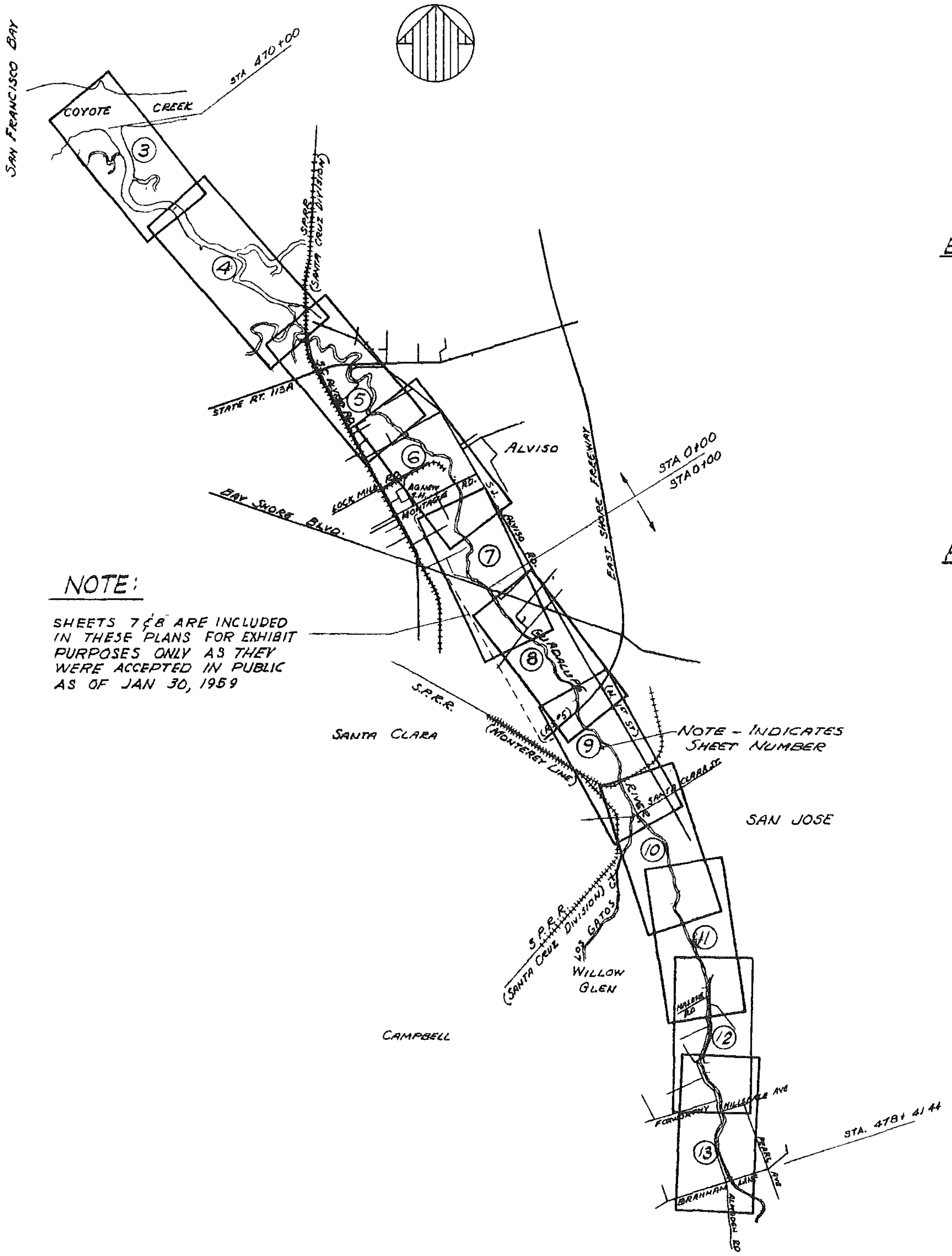
GUADALUPE RIVER IMPROVEMENT

SAN FRANCISCO BAY TO BRANHAM LANE

SANTA CLARA COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT

SANTA CLARA COUNTY, CALIFORNIA

PLATE NO. I   SHEET NO. I OF 16 SHEETS



NOTE:

SHEETS 7 & 8 ARE INCLUDED IN THESE PLANS FOR EXHIBIT PURPOSES ONLY AS THEY WERE ACCEPTED IN PUBLIC AS OF JAN 30, 1959

NOTE - ○ INDICATES SHEET NUMBER

LOCATION MAP AND INDEX TO PLANS AND PROFILES

1 ¾ ½ ¼ 0 ½ 1 2
SCALE IN MILES

LEGEND

EXISTING WORKS

BRIDGE	═╱╱═
FENCE	—×—×—
RAILROAD	┼┼┼┼┼┼
ROADWAY	═══
LEVEE	═ ═ ═
BUILDING	□
BUILDING WITHIN R/W	■

PROPOSED WORKS

SACKED CONCRETE RIP RAP ~ SIDES ONLY	▨
SACKED CONCRETE RIP RAP ~ SIDES & BOTTOM	▨
CONCRETE CHANNEL LINING	▩
CENTER LINE OF CHANNEL	—

GENERAL NOTES

1. COORDINATES ARE BASED ON CALIFORNIA COORDINATE SYSTEM.
2. ELEVATIONS ARE BASED ON U.S.C.&G.S. SEA LEVEL DATUM OF 1929 CORRECTED TO 1959 OBSERVATION BY S.C.C.F.C. & W.C.D.
3. LOCATION OF STORM & SANITARY FACILITIES ARE APPROXIMATE.
4. ALL CURVE DATA IS TO ℄
5. WHERE LEVEES ARE ABOVE EXISTING GROUND LEVEL SIDE DITCHES WILL PROVIDE FOR LOCAL DRAINAGE. DRAINAGE WILL BE CARRIED THROUGH LEVEE BY DRAINAGE PIPES AT STRATEGIC POINTS.
6. REINFORCED CONCRETE LINING MAY BE SUBSTITUTED FOR SACKED RIP RAP ON CONSTRUCTION PLANS.

ABBREVIATIONS

WIDTH OF CHANNEL BOTTOM	b
SLOPE OF CHANNEL SIDES	Z $\frac{1}{Z}$
TOP WIDTH OF CHANNEL AT BRIDGE	T
CUBIC FEET PER SECOND	C.F.S.
RIGHT OF WAY	R/W
BEGIN CURVE	BC
END CURVE	EC
POINT OF REVERSE CURVE	PRC
RADIUS	R
CENTRAL ANGLE	Δ
LENGTH OF CURVE	L
TANGENT DISTANCE	T
CENTER LINE	℄
CORRUGATED METAL PIPE	CMP
STAND PIPE	SP

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2, STATE ROUTE 113A TO MONTAGUE ROAD	5,6
3, MONTAGUE ROAD TO BAYSHORE HIGHWAY	7
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MAP & GENERAL CONSTRUCTION PLANS·ZONE C-1·PROJECT 3
IMPROVEMENT OF GUADALUPE RIVER

SANTA CLARA COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT
CALIFORNIA

PLANS PREPARED BY
CREEGAN AND D'ANGELO
CIVIL ENGINEERS
SAN JOSE, CALIFORNIA

DESIGNED BY K.L.S. OFFICE JOB NO. ____
DRAWN BY K.L.S., J.F.E. T. BK. NO. ____
CHECKED BY J.M.S. L BK. NO. ____
APPROVED BY ____

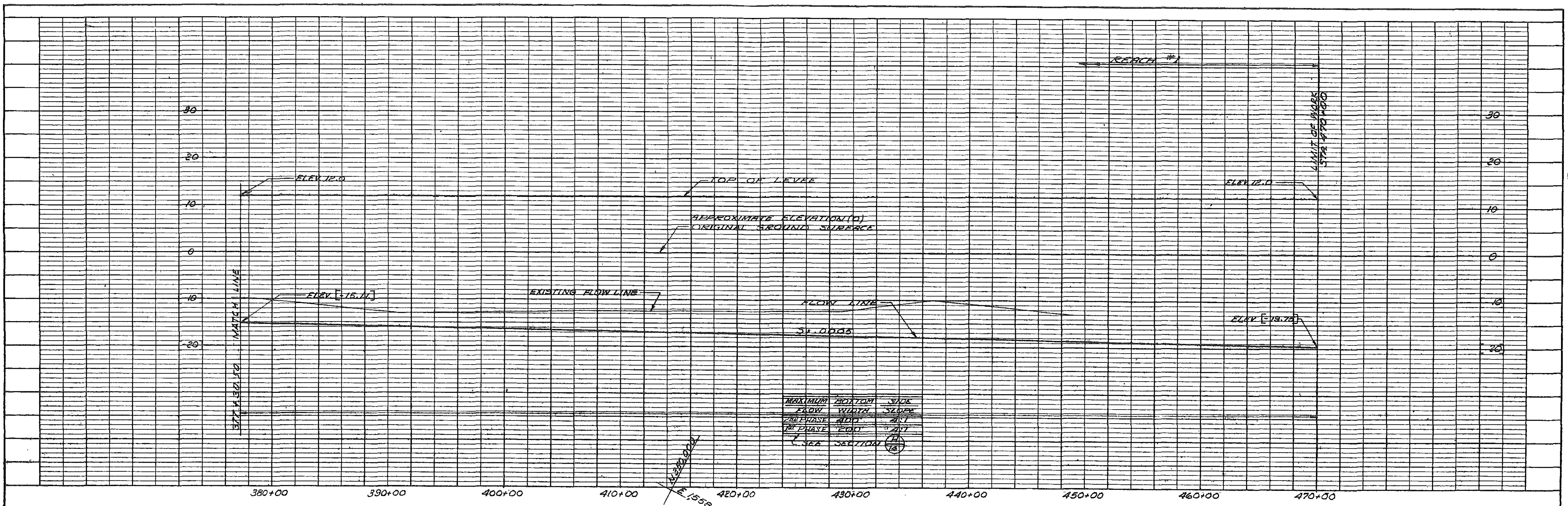
ENGINEER'S APPROVAL George H. Prime
GEORGE H PRIME, SUPERVISING ENGINEER
DEPARTMENT PUBLIC WORKS APPROVAL James B. Enochs
JAMES B ENOCHS - DIRECTOR

D.A.J.
PROJECT COORDINATOR
D.S.
CHECKED BY

ZONE CENTRAL C-1 PROJECT NO. 3
PUBLIC WORKS JOB NO. FC-____

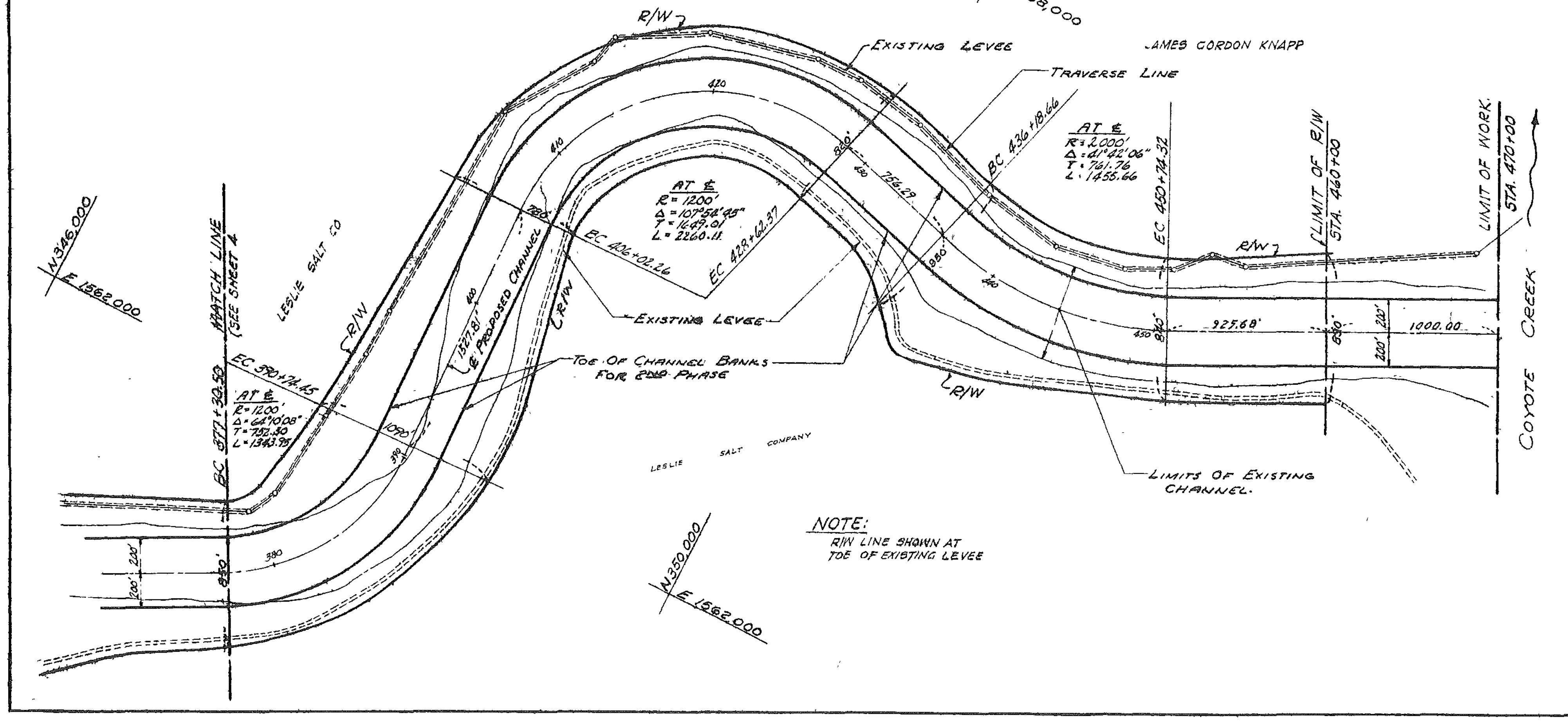
DATE: 3/28/60 SCALE: AS NOTED
SHEET NO. 2 OF 16 SHEETS

PLATE NO. 2



MAXIMUM FLOW	BOTTOM WIDTH	SIDE SLOPE
2ND PHASE	400'	4:1
1ST PHASE	200'	4:1

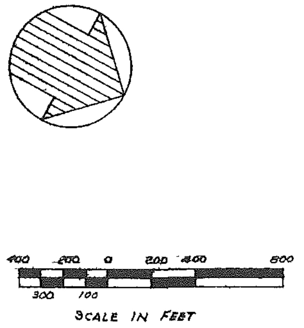
℄ SEE SECTION (B/14)



NOTE:
R/W LINE SHOWN AT TOE OF EXISTING LEVEE

R/W TABLE		
STATION		AREA ✻
FROM	TO	ACRES
377 + 30.50	406+02.26	62.4
406+ 02.26	428+62.37	39.9
428+ 62.37	460+00.00	65.5

✻ BY PLANIMETER MEASUREMENT



REACH #1

MAP & GENERAL CONSTRUCTION PLANS·ZONE C-1·PROJECT 3
IMPROVEMENT OF GUADALUPE RIVER

SANTA CLARA COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT
CALIFORNIA

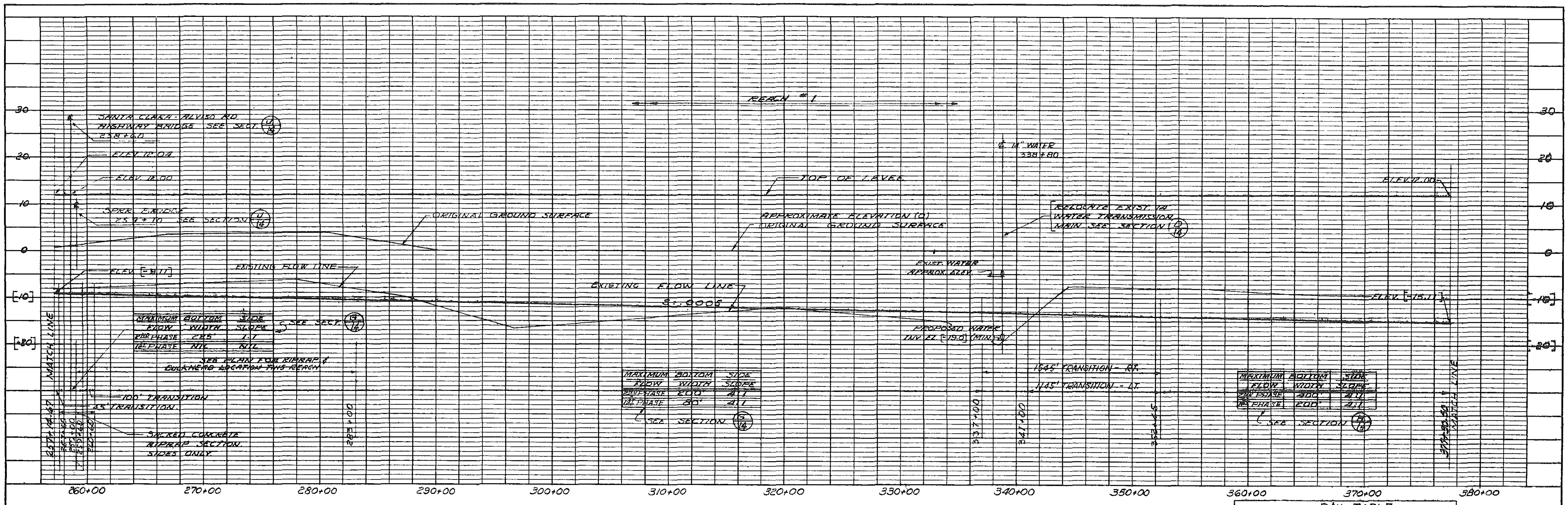
PLANS PREPARED BY
CREEGAN AND D'ANGELO
CIVIL ENGINEERS
SAN JOSE, CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER
PATRICK J. CREEGAN
CE No. 8616
SE No. 1044

DESIGNED BY HHH, EDW OFFICE JOB NO. 2292-1
DRAWN BY LEG, CRE T.BK.NO. U.S.C.E.
CHECKED BY HHH L.BK.NO. U.S.C.E.
APPROVED BY
DATE: SCALE HORIZ. 1"=400' VERT. 1"=10'

ENGINEERS APPROVAL George H. [illegible]
GEORGE H. [illegible] SUPERVISING ENGINEER
DEPARTMENT PUBLIC WORKS APPROVAL James B. Enochs
JAMES B. ENOCHS - DIRECTOR
PROJECT COORDINATOR
CHECKED BY
ZONE CENTRAL C-1 PROJECT NO. 3
PUBLIC WORKS JOB NO. FC-
SHEET NO. 3 OF 16 SHEETS

PLATE NO. 3



MAXIMUM FLOW	BOTTOM WIDTH	SIDE SLOPE
2ND PHASE	285'	1:1
1ST PHASE	NIL	NIL

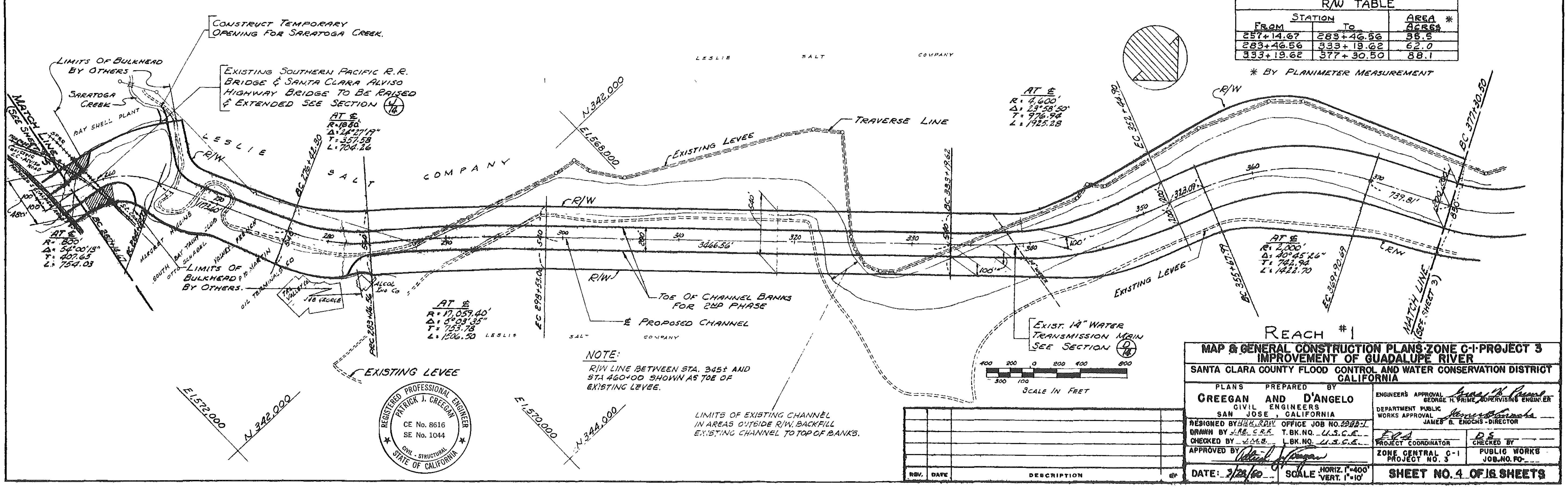
MAXIMUM FLOW	BOTTOM WIDTH	SIDE SLOPE
2ND PHASE	200'	4:1
1ST PHASE	80'	4:1

MAXIMUM FLOW	BOTTOM WIDTH	SIDE SLOPE
2ND PHASE	400'	4:1
1ST PHASE	200'	4:1

R/W TABLE

STATION FROM	STATION TO	AREA ACRES *
257+14.67	283+46.56	38.5
283+46.56	333+19.62	62.0
333+19.62	377+30.50	88.1

* BY PLANIMETER MEASUREMENT


CONSTRUCT TEMPORARY OPENING FOR SARATOGA CREEK.
LIMITS OF BULKHEAD BY OTHERS
SARATOGA CREEK
BAY SHELL PLANT
EXISTING SOUTHERN PACIFIC R.R. BRIDGE & SANTA CLARA ALVISO HIGHWAY BRIDGE TO BE RAISED & EXTENDED SEE SECTION J/14
MATCH LINE (SEE SHEET 5)
LESLIE SALT COMPANY
R/W
AT ℄ R=1880 Δ=24°27'19" T=357.58 L=704.26
BC 276+48.30
AT ℄ R=800' Δ=54°00'13" T=407.65 L=754.03
LIMITS OF BULKHEAD BY OTHERS.
OIL TERMINALS CO
ALCOL IND CO
PRC 283+46.56
AT ℄ R=17,059.40' Δ=5°03'35" T=753.78 L=1506.50
EC 298+53.00
EXISTING LEVEE
TRAVERSE LINE
TOE OF CHANNEL BANKS FOR 2ND PHASE
℄ PROPOSED CHANNEL
3466.56'
BC 333+19.62
AT ℄ R=4,600' Δ=23°58'50" T=976.94 L=1925.28
EC 352+44.90
BC 355+67.99
AT ℄ R=2,000' Δ=40°45'26" T=742.94 L=1422.70
EC 369+90.69
BC 377+30.50
739.81'
323.09'
EXIST. 14" WATER TRANSMISSION MAIN SEE SECTION D/14
MATCH LINE (SEE SHEET 3)
N 342,000
E 1,568,000
E 1,572,000
E 1,570,000
N 344,000
400 200 0 200 400 800
300 100
SCALE IN FEET
REACH #1

NOTE:
R/W LINE BETWEEN STA. 345± AND STA 460+00 SHOWN AS TOE OF EXISTING LEVEE.

LIMITS OF EXISTING CHANNEL IN AREAS OUTSIDE R/W. BACKFILL EXISTING CHANNEL TO TOP OF BANKS.

PATRICK J. CREEGAN
CE No. 8616
SE No. 1044

REV.	DATE	DESCRIPTION	BY

MAP & GENERAL CONSTRUCTION PLANS·ZONE C-1·PROJECT 3
IMPROVEMENT OF GUADALUPE RIVER

SANTA CLARA COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT
CALIFORNIA

PLANS PREPARED BY
CREEGAN AND D'ANGELO
CIVIL ENGINEERS
SAN JOSE, CALIFORNIA

DESIGNED BY H.H.K., R.D.W. OFFICE JOB NO. 5982-1
DRAWN BY J.R.E. C.R.F. T.BK.NO. U.S.C.E.
CHECKED BY J.M.S. L.BK.NO. U.S.C.E.
APPROVED BY Patrick J. Creegan

ENGINEERS APPROVAL George H. Prime
GEORGE H. PRIME, SUPERVISING ENGINEER
DEPARTMENT PUBLIC WORKS APPROVAL James B. Enochs
JAMES B. ENOCHS - DIRECTOR

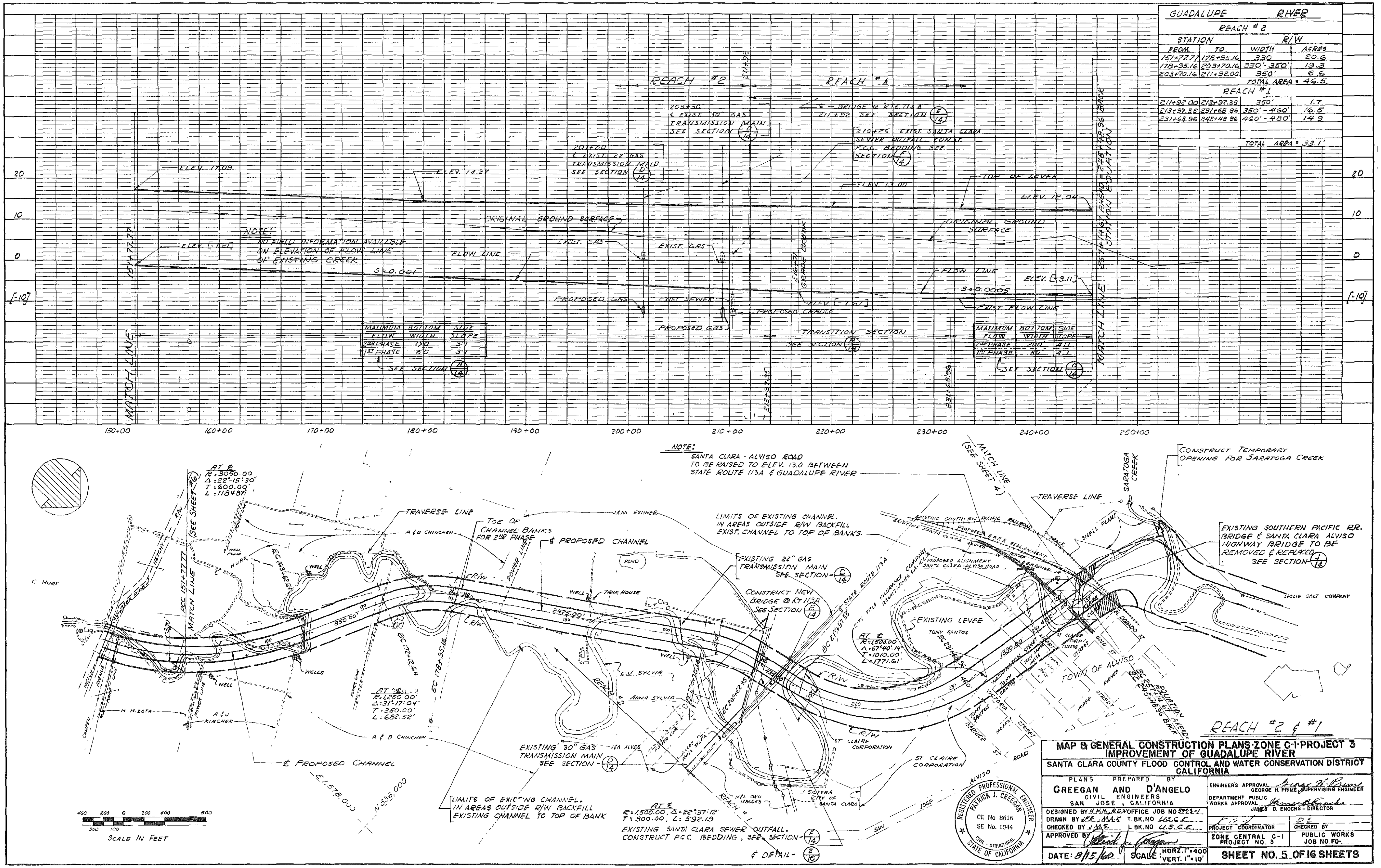
E.A.A. PROJECT COORDINATOR
D.S. CHECKED BY

ZONE CENTRAL C-1 PROJECT NO. 3
PUBLIC WORKS JOB NO. PO-___

DATE: 3/28/60 SCALE HORIZ. 1"=400' VERT. 1"=10'

SHEET NO. 4 OF 16 SHEETS

PLATE NO. 4


REACH #2
REACH #1
209+30
℄ EXIST. 30" GAS TRANSMISSION MAIN SEE SECTION D/14
℄ BRIDGE @ R.T.E. 113A 211+92 SEE SECTION E/14
201+50 ℄ EXIST. 22" GAS TRANSMISSION MAIN SEE SECTION D/14
210+25 EXIST. SANTA CLARA SEWER OUTFALL. CONST. P.C.C. BEDDING SEE SECTION F/14
ELEV. 17.09
ELEV. 14.27
ELEV. 13.00
TOP OF LEVEE
ELEV. 12.04
ORIGINAL GROUND SURFACE
NOTE: NO FIELD INFORMATION AVAILABLE ON ELEVATION OF FLOW LINE OF EXISTING CREEK
ELEV [-1.21]
FLOW LINE
S=0.001
S=0.0005
EXIST. GAS
GRADE BREAK
ELEV [-1.67]
ELEV [-3.11]
EXIST. FLOW LINE
PROPOSED GAS
EXIST SEWER
PROPOSED CRADLE
TRANSITION SECTION SEE SECTION B/14
SEE SECTION B/14
SEE SECTION C/14
MATCH LINE
151+77.77
213+97.35
231+68.96
245+48.96 BACK = 257+14.67 AHEAD STATION EQUATION
20
10
0
[-10]
150+00
160+00
170+00
180+00
190+00
200+00
210+00
220+00
230+00
240+00
250+00
NOTE: SANTA CLARA - ALVISO ROAD TO BE RAISED TO ELEV. 13.0 BETWEEN STATE ROUTE 113A & GUADALUPE RIVER
MATCH LINE (SEE SHEET 4)
CONSTRUCT TEMPORARY OPENING FOR SARATOGA CREEK
SARATOGA CREEK
TRAVERSE LINE
EXISTING SOUTHERN PACIFIC R.R. BRIDGE & SANTA CLARA ALVISO HIGHWAY BRIDGE TO BE REMOVED & REPLACED SEE SECTION J/14
LESLIE SALT COMPANY
SHELL PLANT
AT ℄ R: 3050.00 Δ: 22°-15'-30" T: 600.00' L: 1184.87'
TOE OF CHANNEL BANKS FOR 2ND PHASE
℄ PROPOSED CHANNEL
LIMITS OF EXISTING CHANNEL. IN AREAS OUTSIDE R/W BACKFILL EXIST. CHANNEL TO TOP OF BANKS.
EXISTING 22" GAS TRANSMISSION MAIN SEE SECTION D/14
CONSTRUCT NEW BRIDGE @ RT 113A SEE SECTION E/14
EXISTING LEVEE
TOWN OF ALVISO
C HURT
PC 151+77.77
MATCH LINE (SEE SHEET #6)
AT ℄ R: 1250.00' Δ: 31°17'04" T: 350.00' L: 682.52'
AT ℄ R: 1500.00 Δ: 67°40'14" T: 1010.00' L: 1771.61'
BC 172+12.64
EC 178+95.16
BC 214+97.35
EC 231+68.96
EC 163+62.64
EC 200+62.35
WELLS
WELL
TANK HOUSE
POND
J.&M. ESHNER
A & B CHINCHEN
HURK
M. M. ZOTA
A & J KIRCHER
C. J. SYLVIA
ANNA SYLVIA
TONY SANTOS
ST CLAIRE CORPORATION
CITY OF SANTA CLARA
EXISTING 30" GAS TRANSMISSION MAIN SEE SECTION D/14
LIMITS OF EXISTING CHANNEL. IN AREAS OUTSIDE R/W BACKFILL EXISTING CHANNEL TO TOP OF BANK
AT ℄ R: 1,500.00, Δ: 22°37'12" T: 300.00, L: 592.19
EXISTING SANTA CLARA SEWER OUTFALL. CONSTRUCT P.C.C. BEDDING, SEE SECTION F/14
℄ DETAIL - 2/16
℄ PROPOSED CHANNEL
E 1,578,000
N 336,000
REACH #2
REACH #1
R/W
850.00'
2475.00'
1390.00'
EQUATION 257+14.67 AHEAD 245+48.96 BACK
400 200 0 200 400 800
300 100
SCALE IN FEET

MAXIMUM FLOW	BOTTOM WIDTH	SIDE SLOPE
2ND PHASE	130	3:1
1ST PHASE	60	3:1

MAXIMUM FLOW	BOTTOM WIDTH	SIDE SLOPE
2ND PHASE	200'	4:1
1ST PHASE	80'	4:1

GUADALUPE RIVER

REACH #2

STATION FROM	STATION TO	R/W WIDTH	R/W ACRES
151+77.77	178+95.16	330	20.6
178+95.16	203+70.16	330'-350'	19.3
203+70.16	211+92.00	350'	6.6
		TOTAL AREA =	46.5

REACH #1

STATION FROM	STATION TO	R/W WIDTH	R/W ACRES
211+92.00	213+97.35	350'	1.7
213+97.35	231+68.96	350'-460'	16.5
231+68.96	245+48.96	460'-480'	14.9
		TOTAL AREA =	33.1'

REACH #2 & #1

MAP & GENERAL CONSTRUCTION PLANS·ZONE C-1·PROJECT 3 IMPROVEMENT OF GUADALUPE RIVER

SANTA CLARA COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT
CALIFORNIA

PLANS PREPARED BY
CREEGAN AND D'ANGELO
CIVIL ENGINEERS
SAN JOSE, CALIFORNIA

DESIGNED BY H.H.H., R.D.W. OFFICE JOB NO 5923-1
DRAWN BY J.F.F., M.A.K. T.BK.NO U.S.C.E.
CHECKED BY J.M.S. L.BK.NO U.S.C.E.
APPROVED BY Patrick J. Creegan

REGISTERED PROFESSIONAL ENGINEER PATRICK J. CREEGAN CE No 8616 SE No. 1044 CIVIL - STRUCTURAL STATE OF CALIFORNIA

ENGINEER'S APPROVAL George H. Prime
GEORGE H. PRIME, SUPERVISING ENGINEER
DEPARTMENT PUBLIC WORKS APPROVAL James B. Enochs
JAMES B. ENOCHS - DIRECTOR

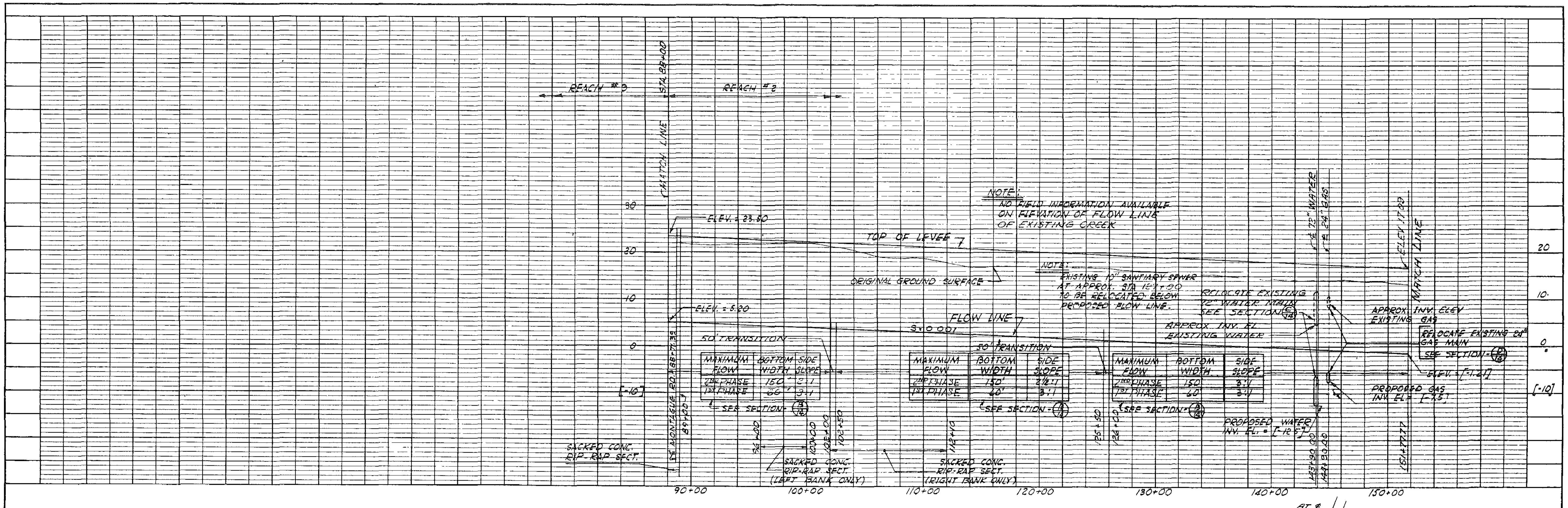
PROJECT COORDINATOR
D E
CHECKED BY

ZONE CENTRAL C-1 PROJECT NO. 3
PUBLIC WORKS JOB NO. FC-

DATE: 8/15/60
SCALE: HORZ. 1"=400 VERT. 1"=10'

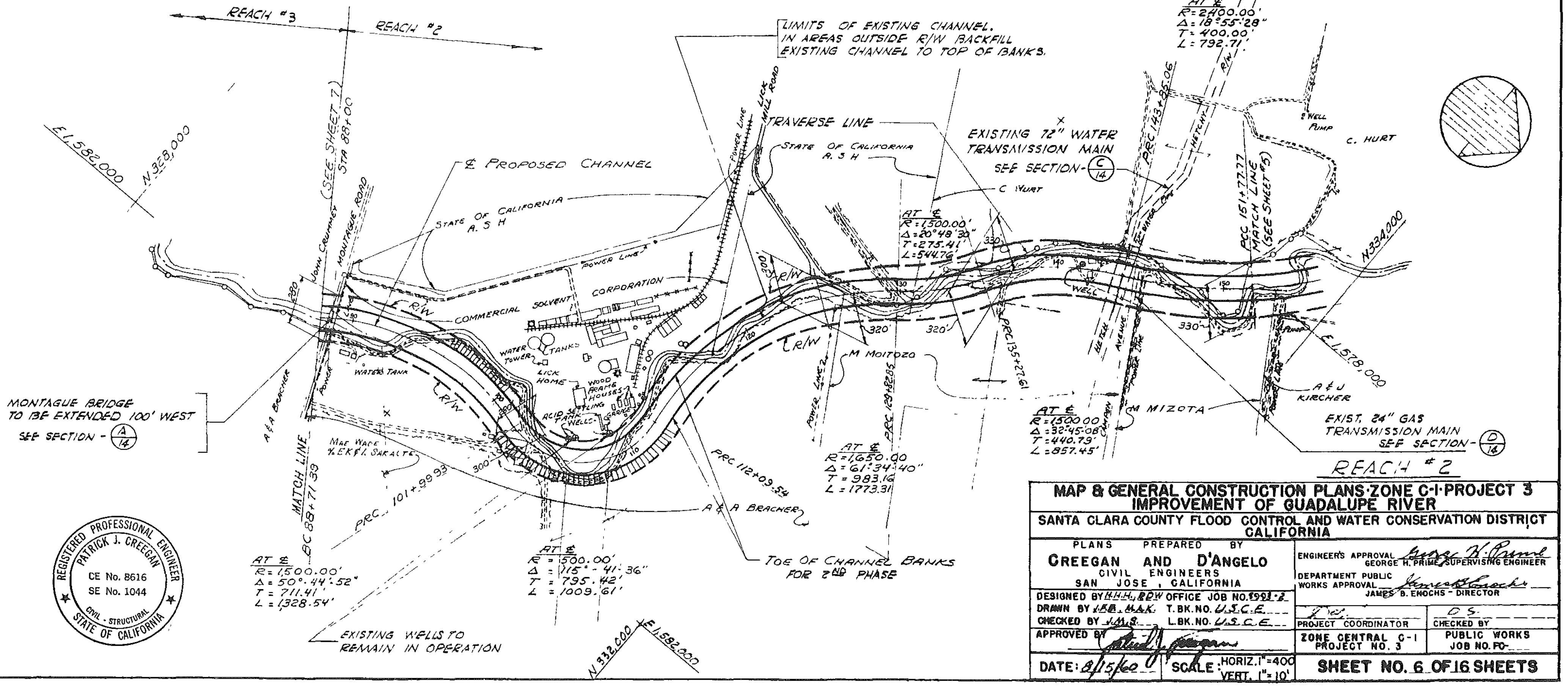
SHEET NO. 5 OF 16 SHEETS

PLATE NO. 5



NOTE:
REACHES 3 & 4 NOT INCLUDED IN THESE PLANS. SEE SHEET 7 FOR PLAN OF REACH 5.

REACH #2 GUADALUPE RIVER			
STATION		R/W	
FROM	TO	WIDTH	ACRES
88+71.39	101+99.93	280'	8.5
101+99.93	125+50.00	300'	16.2
125+50.00	135+27.61	320'	7.2
135+27.61	151+77.77	330'	12.5
TOTAL AREA =			44.4



REGISTERED PROFESSIONAL ENGINEER
PATRICK J. CREEGAN
CE No. 8616
SE No. 1044
CIVIL - STRUCTURAL
STATE OF CALIFORNIA

400 200 0 200 400 800
SCALE IN FEET

REACH #2

MAP & GENERAL CONSTRUCTION PLANS·ZONE C-1·PROJECT 3
IMPROVEMENT OF GUADALUPE RIVER

SANTA CLARA COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT
CALIFORNIA

PLANS PREPARED BY
CREEGAN AND D'ANGELO
CIVIL ENGINEERS
SAN JOSE, CALIFORNIA

DESIGNED BY H.H.H., R.D.W. OFFICE JOB NO. 1991-2
DRAWN BY L.B.B., M.A.K. T.BK.NO. U.S.C.E.
CHECKED BY J.M.S. L.BK.NO. U.S.C.E.
APPROVED BY Patrick J. Creegan

ENGINEER'S APPROVAL George H. Prime
GEORGE H. PRIME, SUPERVISING ENGINEER
DEPARTMENT PUBLIC WORKS APPROVAL James B. Enochs
JAMES B. ENOCHS - DIRECTOR

J. D. C.
PROJECT COORDINATOR
D. S.
CHECKED BY

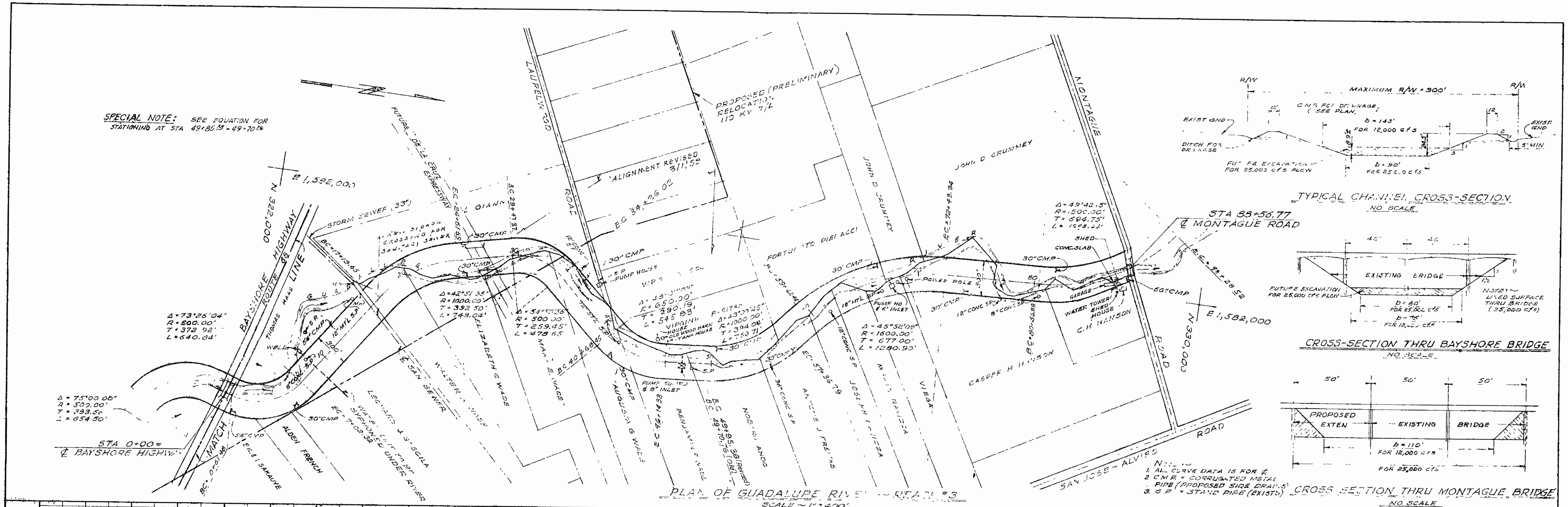
ZONE CENTRAL C-1
PROJECT NO. 3
PUBLIC WORKS
JOB NO. PO-

DATE: 8/15/60
SCALE: HORIZ. 1" = 400'
VERT. 1" = 10'

SHEET NO. 6 OF 16 SHEETS

PLATE NO. 6

SPECIAL NOTE: SEE EQUATION FOR STATIONING AT STA 49+85.39 = 49+70.76



PLAN OF GUADALUPE RIVER ~ REACH #3

SCALE ~ 1" = 400'

NOTES

1. ALL CURVE DATA IS FOR ℄
2. C.M.P. = CORRUGATED METAL PIPE (PROPOSED SIDE DRAINS)
3. S.P. = STAND PIPE (EXIST'G)

TYPICAL CHANNEL CROSS-SECTION

NO SCALE

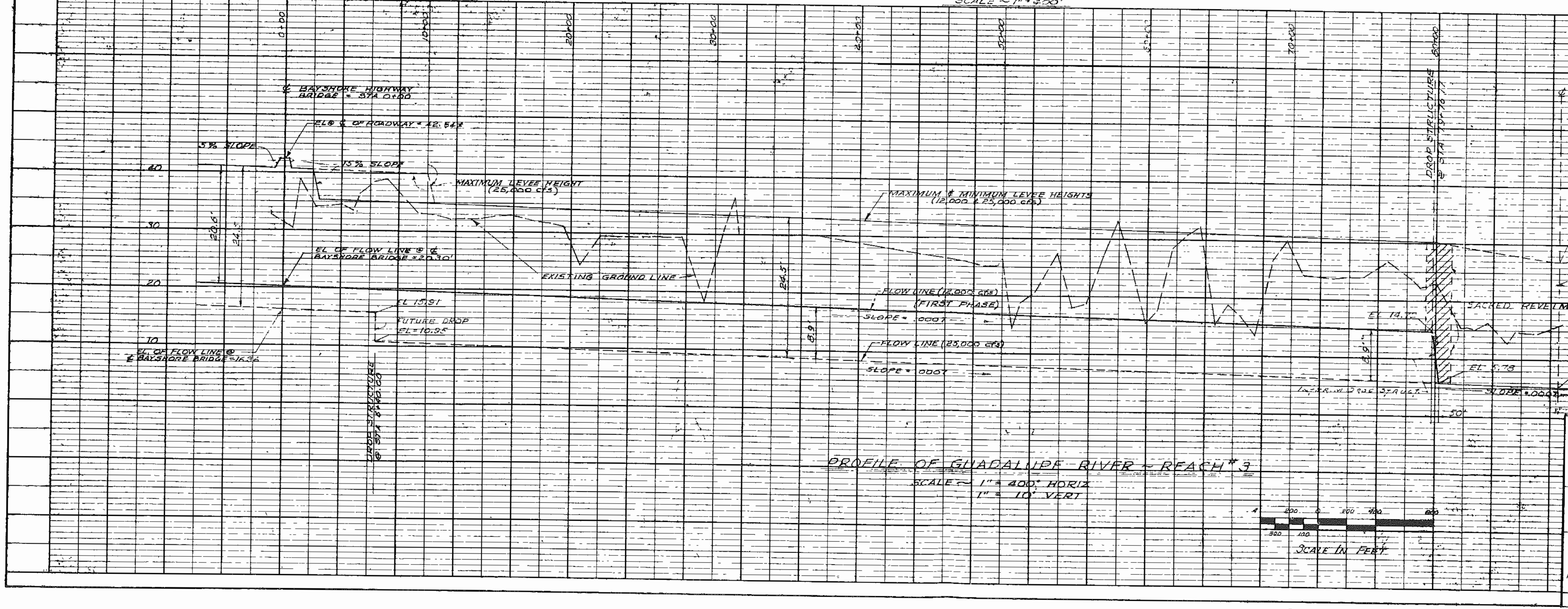
EXISTING BRIDGE
FUTURE EXCAVATION FOR 25,000 cfs FLOW
b = 60' FOR 25,000 cfs
b = 75' FOR 12,000 cfs
NOTE: LINED SURFACE THRU BRIDGE (35,000 cfs)

CROSS-SECTION THRU BAYSHORE BRIDGE

NO SCALE

CROSS SECTION THRU MONTAGUE BRIDGE

NO SCALE



PROFILE OF GUADALUPE RIVER ~ REACH #3

SCALE ~ 1" = 400' HORIZ
1" = 10' VERT

MAP & GENERAL CONSTRUCTION PLANS
FOR
GUADALUPE RIVER
CENTRAL ZONE PROJECT Nº 3

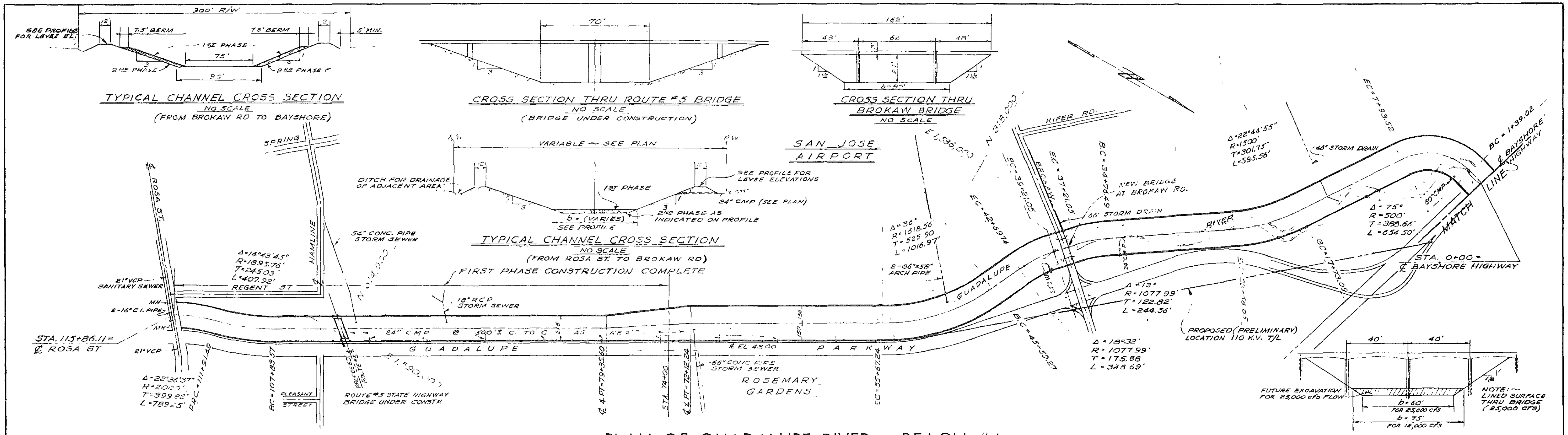
SANTA CLARA COUNTY FLOOD CONTROL
AND
WATER CONSERVATION DISTRICT

Approved By George H. Prime
George H Prime Supv Eng., Flood Control Sect

Design By	
Drawn By	
Checked By ES	
DATE 1-29-59	
SCALE AS SHOWN	
Job Nº F.C.1455	

PLATE NO. 7

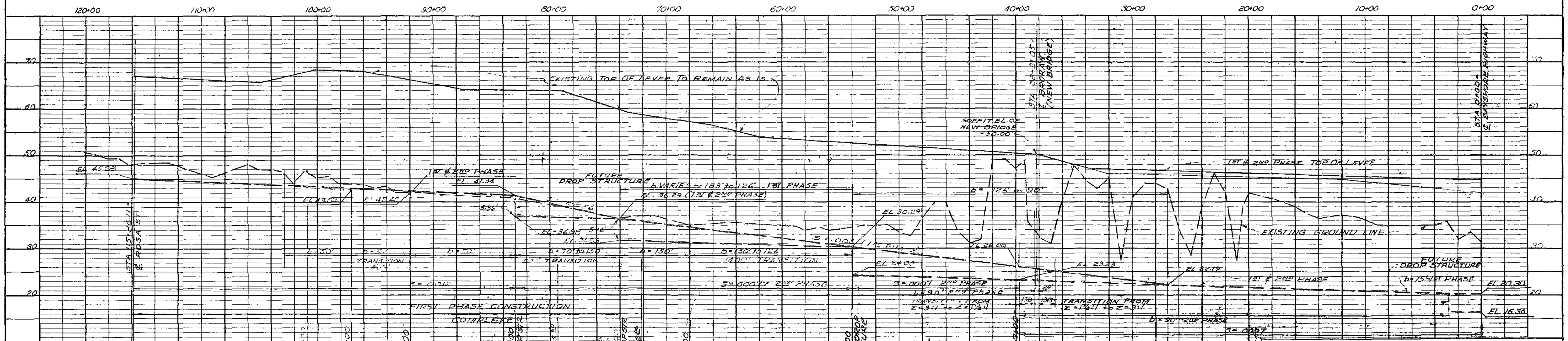
SHEET 7 OF 16 SHEETS


300' R/W
SEE PROFILE FOR LEVEE EL.
7.5' BERM
1ST PHASE
2ND PHASE
75'
95'
5' MIN.
TYPICAL CHANNEL CROSS SECTION
NO SCALE
(FROM BROKAW RD TO BAYSHORE)
70'
CROSS SECTION THRU ROUTE #5 BRIDGE
NO SCALE
(BRIDGE UNDER CONSTRUCTION)
162'
48'
66
48'
b=95'
CROSS SECTION THRU BROKAW BRIDGE
NO SCALE
VARIABLE ~ SEE PLAN
DITCH FOR DRAINAGE OF ADJACENT AREA
1ST PHASE
SEE PROFILE FOR LEVEE ELEVATIONS
24" CMP (SEE PLAN)
b = (VARIES) SEE PROFILE
2ND PHASE AS INDICATED ON PROFILE
TYPICAL CHANNEL CROSS SECTION
NO SCALE
(FROM ROSA ST. TO BROKAW RD)
SAN JOSE AIRPORT
SPRING
HAMLINE
ROSA ST.
REGENT ST
54" CONC. PIPE STORM SEWER
FIRST PHASE CONSTRUCTION COMPLETE
18" RCP STORM SEWER
21" VCP SANITARY SEWER
2-16" C.I. PIPE
STA. 115+86.11 = ℄ ROSA ST
Δ=14°43'45" R=1895.76' T=245.03' L=407.92'
Δ=22°36'37" R=2000' T=399.85' L=789.25'
24" CMP @ 500'± C. TO C.
GUADALUPE PARKWAY
ROUTE #5 STATE HIGHWAY BRIDGE UNDER CONSTR
PLEASANT STREET
BC=107+83.37
66" CONC PIPE STORM SEWER
ROSEMARY GARDENS
EC=55+67.24
Δ=36° R=1618.56' T=525.90 L=1016.97'
2-36"x58" ARCH PIPE
GUADALUPE RIVER
KIFER RD.
BROKAW
EC=37+21.05
BC=34+76.49
NEW BRIDGE AT BROKAW RD.
66" STORM DRAIN
EC=42+69.74
BC=45+50.87
Δ=13° R=1077.99' T=122.82' L=244.36'
Δ=18°32' R=1077.99' T=175.88 L=348.69'
PROPOSED (PRELIMINARY) LOCATION 110 K.V. T/L
Δ=22°44'55" R=1500 T=301.75' L=595.56'
48" STORM DRAIN
EC=7+93.52
BC=11+39.02
℄ BAYSHORE HIGHWAY
MATCH LINE
Δ=75° R=500' T=383.66' L=654.50'
STA. 0+00 = ℄ BAYSHORE HIGHWAY
40'
40'
FUTURE EXCAVATION FOR 25,000 cfs FLOW
b=60' FOR 25,000 CFS
b=75' FOR 18,000 CFS
NOTE: ~ LINED SURFACE THRU BRIDGE (25,000 CFS)

PLAN OF GUADALUPE RIVER — REACH #4

SCALE — 1" = 400'

CROSS-SECTION THRU BAYSHORE BRIDGE
NO SCALE



STA 101+00
STA 97+00
STA 92+00
STA 83+00 FUTURE DROP STR
STA 79+35.50
STA 74+00 FUTURE DROP STR
STA 68+00
STA 54+00 FUTURE DROP STRUCTURE
STA 21+00

PROFILE OF GUADALUPE RIVER ~ REACH # 4

SCALE: ~ 1" = 400' HORIZ.
1" = 10' VERT.

SCALE IN FEET

MAP & GENERAL CONSTRUCTION PLANS
FOR
GUADALUPE RIVER
CENTRAL ZONE PROJECT Nº 3

SANTA CLARA COUNTY FLOOD CONTROL
AND
WATER CONSERVATION DISTRICT

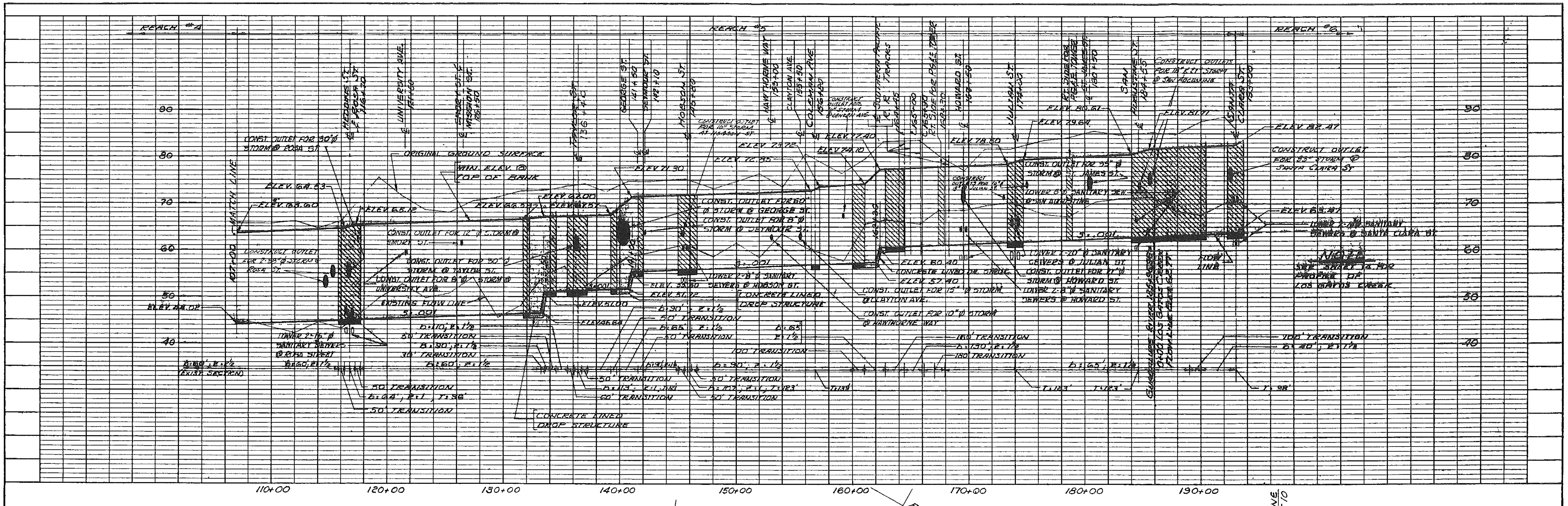
Design By DS-TK
Drawn By C.T.
Checked By
SCALE AS SHOWN

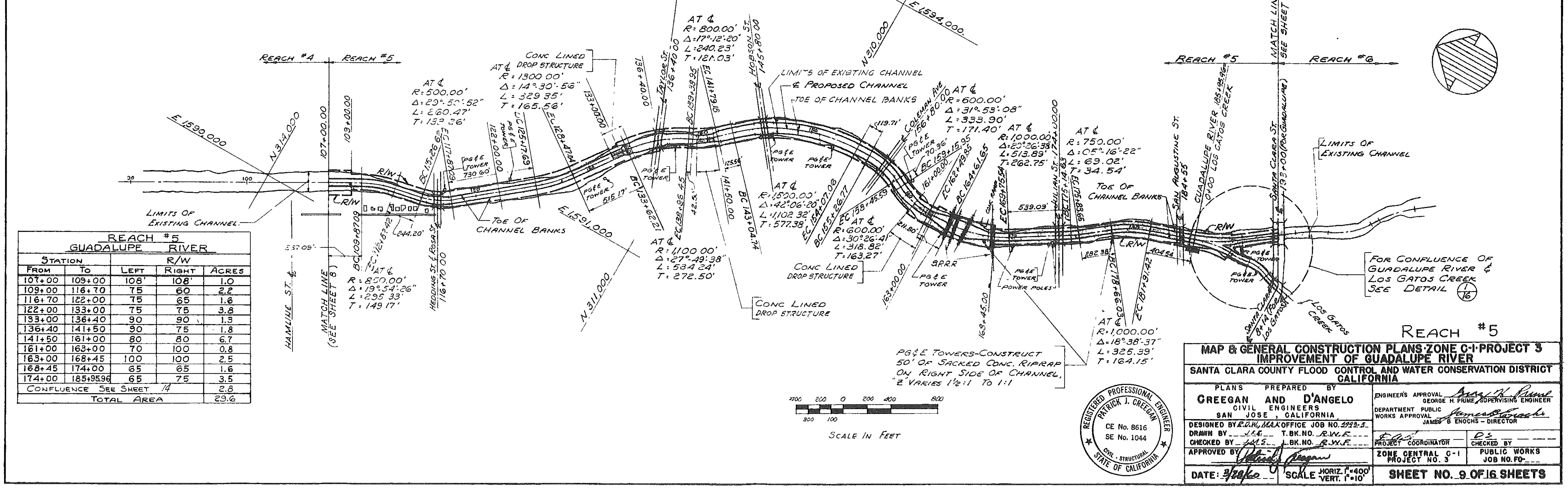
Approved By George H. Prime
George H Prime Supv Eng., Flood Control Sect

DATE 1-29-59
Job Nº F.C.1455

PLATE NO. 8

SHEET 8 OF 16 SHEETS


REACH #4
REACH #5
REACH #6
90
80
70
60
50
40
107+00 MATCH LINE
℄ HEDDING ST. ℄ ROSA ST. 116+70
℄ UNIVERSITY AVE. 121+60
℄ EMORY ST. ℄ MISSION ST. 126+50
℄ TAYLOR ST. 136+40
℄ GEORGE ST. 141+50
℄ SEYMOUR ST. 142+10
℄ HOBSON ST. 145+00
℄ HAWTHORNE WAY 153+00
℄ CLAYTON AVE. 155+50
℄ COLEMAN AVE. 156+00
℄ SOUTHERN PACIFIC R.R. TRACKS
℄ HOWARD ST. 169+50
℄ JULIAN ST. 174+00
℄ ST. JAMES ST. 180+50
SAN AUGUSTINE ST. 184+55
℄ SANTA CLARA ST. 193+00
CONST. OUTLET FOR 30"ø STORM @ ROSA ST.
ORIGINAL GROUND SURFACE
MIN. ELEV. @ TOP OF BANK
ELEV. 64.53
ELEV. 63.60
ELEV. 65.12
ELEV. 66.53
ELEV. 67.00
ELEV. 67.57
ELEV. 71.30
ELEV. 72.85
ELEV. 73.72
ELEV. 74.10
ELEV. 77.40
ELEV. 78.50
ELEV. 79.64
ELEV. 80.67
ELEV. 81.71
ELEV. 82.47
ELEV. 44.02
CONSTRUCT OUTLET FOR 2-33"ø STORM @ ROSA ST.
CONST. OUTLET FOR 12"ø STORM @ EMORY ST.
CONST. OUTLET FOR 50"ø STORM @ TAYLOR ST.
CONST. OUTLET FOR 8"ø STORM @ UNIVERSITY AVE.
EXISTING FLOW LINE
S=.001
LOWER 2-15"ø SANITARY SEWERS @ ROSA STREET
B=60', Z=1½ (EXIST. SECTION)
B=60', Z=1½
B=110', Z=1½
50' TRANSITION
B=90', Z=1½
30' TRANSITION
B=60', Z=1½
50' TRANSITION
B=64', Z=1, T=96'
50' TRANSITION
CONCRETE LINED DROP STRUCTURE
CONSTRUCT OUTLET FOR 10" STORM AT HOBSON ST.
CONST. OUTLET FOR 60"ø STORM @ GEORGE ST.
CONST. OUTLET FOR 8"ø STORM @ SEYMOUR ST.
LOWER 2-8"ø SANITARY SEWERS @ HOBSON ST.
ELEV. 53.50
ELEV. 51.72
ELEV. 51.00
ELEV. 46.64
CONCRETE LINED DROP STRUCTURE
B=90', Z=1½
50' TRANSITION
B=65', Z=1½
50' TRANSITION
B=65 Z=1½
100' TRANSITION
B=90', Z=1½
50' TRANSITION
B=113', Z=1, T=181
60' TRANSITION
50' TRANSITION
B=107', Z=1, T=123'
50' TRANSITION
T=139
CONSTRUCT OUTLET FOR 6" STORM @ LENZEN AVE.
CONSTRUCT OUTLETS FOR 10"ø & 8"ø @ JULIAN ST.
ELEV. 60.40
CONCRETE LINED DR. STRUC.
ELEV. 57.40
CONST. OUTLET FOR 15"ø STORM @ CLAYTON AVE.
CONST. OUTLET FOR 10"ø STORM @ HAWTHORNE WAY
160' TRANSITION
B=130', Z=1½
180' TRANSITION
CONST. OUTLET FOR 33"ø STORM @ ST. JAMES ST.
LOWER 8"ø SANITARY SEW. @ SAN AUGUSTINE
LOWER 2-20"ø SANITARY SEWERS @ JULIAN ST.
CONST. OUTLET FOR 27"ø STORM @ HOWARD ST.
LOWER 2-8"ø SANITARY SEWERS @ HOWARD ST.
CONSTRUCT OUTLETS FOR 18" & 27" STORM @ SAN AUGUSTINE
CONSTRUCT OUTLET FOR 33" STORM @ SANTA CLARA ST.
ELEV. 63.47
LOWER 2-10"ø SANITARY SEWERS @ SANTA CLARA ST.
FLOW LINE
GUADALUPE RIVER 185+95.96 0+00 LOS GATOS CREEK FLOW LINE ELEV. 62.77
NOTE SEE SHEET 14 FOR PROFILE OF LOS GATOS CREEK
B=65', Z=1½
T=123'
T=123'
100' TRANSITION
B=40', Z=1½
T=98'
110+00
120+00
130+00
140+00
150+00
160+00
170+00
180+00
190+00


REACH #4
REACH #5
REACH #6
E 1,590,000
E 1,591,000
E 1,594,000
N 314,000
N 311,000
N 310,000
MATCH LINE SEE SHEET 10
MATCH LINE (SEE SHEET 8)
HAMLINE ST. ℄
107+00.00
109+02.00
LIMITS OF EXISTING CHANNEL
R/W
TOE OF CHANNEL BANKS
HEDDING ST. & ROSA ST. 116+70.00
AT ℄ R=500.00' Δ=23°-50'-52" L=260.47' T=132.26'
AT ℄ R=850.00' Δ=19°-54'-26" L=295.33' T=149.17'
CONC LINED DROP STRUCTURE
AT ℄ R=1300.00' Δ=14°-30'-58" L=329.35' T=165.56'
PG&E TOWER
AT ℄ R=800.00' Δ=17°-12'-20" L=240.23' T=121.03'
TAYLOR ST. 136+40.00
HOBSON ST. 145+00.00
AT ℄ R=1,100.00' Δ=27°-49'-38" L=534.24' T=272.50'
CONC LINED DROP STRUCTURE
LIMITS OF EXISTING CHANNEL
℄ PROPOSED CHANNEL
TOE OF CHANNEL BANKS
AT ℄ R=1500.00' Δ=42°-06'-20" L=1,102.32' T=577.38'
AT ℄ R=600.00' Δ=31°-53'-08" L=333.90' T=171.40'
COLEMAN AVE. 156+00.00
AT ℄ R=600.00' Δ=30°-26'-41" L=318.82' T=163.27'
AT ℄ R=1,000.00' Δ=20°-26'-38" L=513.89' T=262.75'
JULIAN ST. 174+00.00
SPRR
CONC LINED DROP STRUCTURE
PG&E TOWER
POWER POLES
AT ℄ R=750.00' Δ=05°-16'-22" L=69.02' T=34.54'
TOE OF CHANNEL BANKS
SAN AUGUSTINE ST. 184+55
GUADALUPE RIVER 185+95.96 0+00 LOS GATOS CREEK
SANTA CLARA ST. 193+00 (FOR GUADALUPE)
SANTA CLARA ST. 8+1A (FOR LOS GATOS)
LOS GATOS CREEK
AT ℄ R=1,000.00' Δ=18°-38'-37" L=325.39' T=164.15'
LIMITS OF EXISTING CHANNEL
FOR CONFLUENCE OF GUADALUPE RIVER & LOS GATOS CREEK SEE DETAIL 1/16
PG&E TOWERS-CONSTRUCT 50' OF SACKED CONC. RIPRAP ON RIGHT SIDE OF CHANNEL, "Z" VARIES 1½:1 TO 1:1
400 200 0 200 400 800
300 100
SCALE IN FEET
110+00
120+00
130+00
140+00
150+00
160+00
170+00
180+00
190+00

REACH #5 GUADALUPE RIVER				
STATION		R/W		
FROM	TO	LEFT	RIGHT	ACRES
107+00	109+00	108'	108'	1.0
109+00	116+70	75	60	2.2
116+70	122+00	75	65	1.6
122+00	133+00	75	75	3.8
133+00	136+40	90	90	1.3
136+40	141+50	90	75	1.8
141+50	161+00	80	80	6.7
161+00	163+00	70	100	0.8
163+00	168+45	100	100	2.5
168+45	174+00	65	65	1.6
174+00	185+95.96	65	75	3.5
CONFLUENCE SEE SHEET 14				2.8
TOTAL AREA				29.6

REACH #5

MAP & GENERAL CONSTRUCTION PLANS·ZONE C-1·PROJECT 3
IMPROVEMENT OF GUADALUPE RIVER

SANTA CLARA COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT
CALIFORNIA

PLANS PREPARED BY
CREEGAN AND D'ANGELO
CIVIL ENGINEERS
SAN JOSE, CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER
PATRICK J. CREEGAN
CE No. 8616
SE No. 1044
CIVIL - STRUCTURAL
STATE OF CALIFORNIA

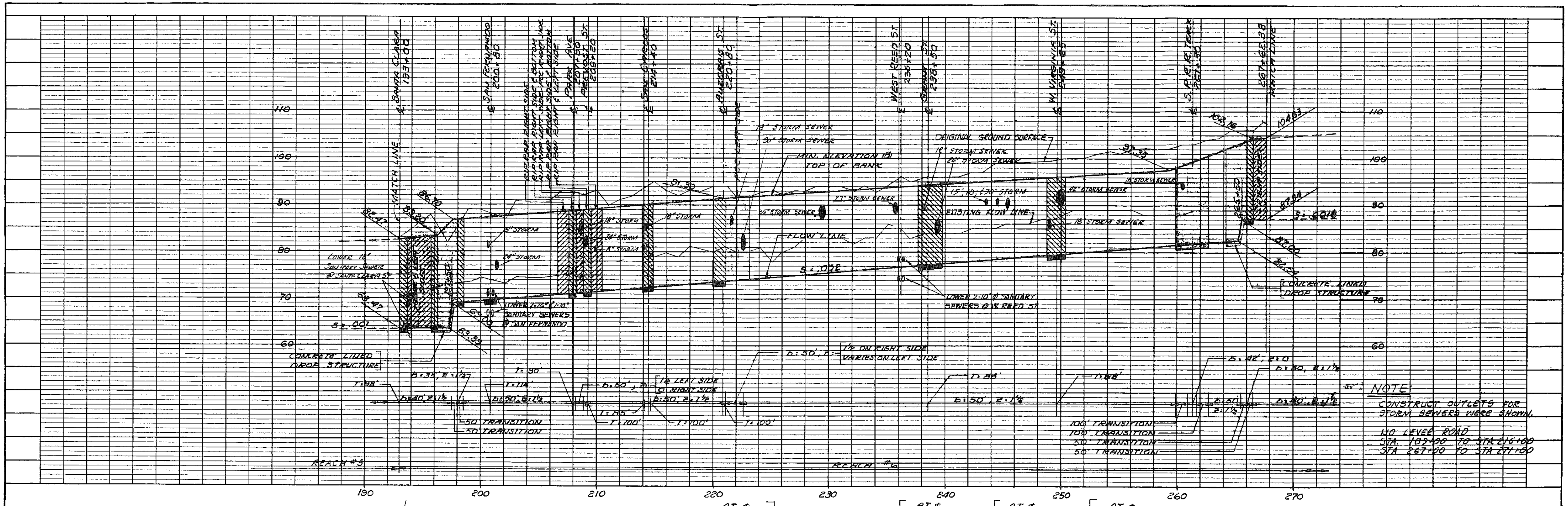
ENGINEER'S APPROVAL George H. Prime
GEORGE H. PRIME, SUPERVISING ENGINEER
DEPARTMENT PUBLIC WORKS APPROVAL James B. Enochs
JAMES B ENOCHS – DIRECTOR

DESIGNED BY R.D.W., MAK OFFICE JOB NO. 1992-5
DRAWN BY J.E.E. T.BK.NO. R.W.F.
CHECKED BY JMS L.BK.NO. R.W.F.
APPROVED BY Patrick J. Creegan

PROJECT COORDINATOR
CHECKED BY D.S.
ZONE CENTRAL C-1 PROJECT NO. 3
PUBLIC WORKS JOB NO. FO-

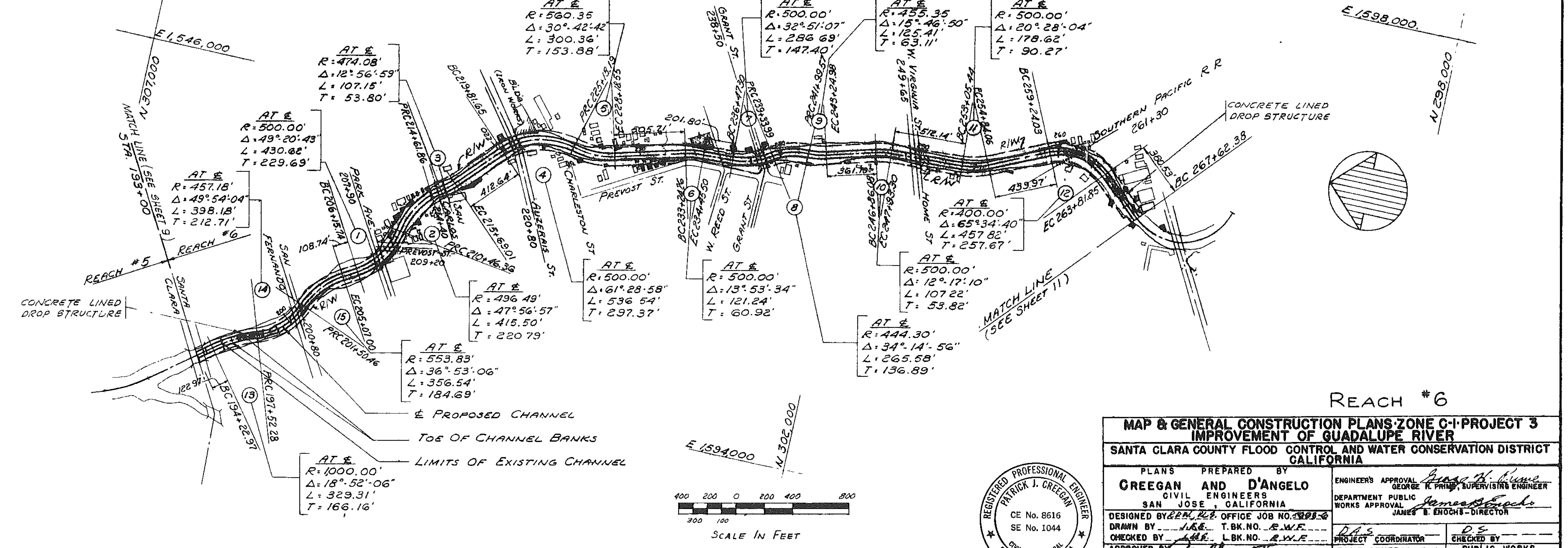
DATE: 3/28/60
SCALE HORIZ. 1"=400' VERT. 1"=10'
SHEET NO. 9 OF 16 SHEETS

PLATE NO. 9



NOTE:
CONSTRUCT OUTLETS FOR STORM SEWERS WERE SHOWN.

NO LEVEE ROAD
STA. 189+00 TO STA 216+00
STA 267+00 TO STA 271+00



REACH #6 GUADALUPE RIVER				
STATION		R/W		
FROM	TO	LEFT	RIGHT	ACRES
193+00	203+00	50'	50'	2.0
203+00	207+90	50'	55'	1.1
207+90	210+50	60'	45'	0.4
210+50	214+40	60'	60'	0.9
214+40	216+00	66'	58'	0.3
216+00	220+80	66'	66'	1.4
220+80	222+40	*	66'	0.4
222+40	232+50	66'	66'	3.1
232+50	238+30	66'	* *	1.7
238+30	249+60	66'	66'	3.2
249+60	256+00	* * *	68'	1.8
256+00	260+50	68'	68'	1.3
260+50	261+30	50'	68'	0.2
261+30	263+00	68'	68'	0.5
263+00	267+00	58'	73'	1.2
267+00	267+62.38	50'	50'	0.1
TOTAL AREA				19.6

*	PROPERTY LINE OF IRON WORKS
* *	EAST CURB LINE OF PREVOST ST.
* * *	WEST CURB LINE OF MC CLELLAN ST.

REACH #6

MAP & GENERAL CONSTRUCTION PLANS · ZONE C-1 · PROJECT 3
IMPROVEMENT OF GUADALUPE RIVER

SANTA CLARA COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT
CALIFORNIA

PLANS PREPARED BY
CREEGAN AND D'ANGELO
CIVIL ENGINEERS
SAN JOSE, CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER
PATRICK J. CREEGAN
CE No. 8616
SE No. 1044
CIVIL - STRUCTURAL
STATE OF CALIFORNIA

DESIGNED BY E.P.M., R.L.S. OFFICE JOB NO. 1905-6
DRAWN BY J.E.E. T.BK.NO. R.W.F.
CHECKED BY J.E.E. L.BK.NO. R.W.F.
APPROVED BY Patrick J. Creegan

ENGINEER'S APPROVAL George H. Prime
GEORGE H. PRIME, SUPERVISING ENGINEER

DEPARTMENT PUBLIC WORKS APPROVAL James B. Enochs
JAMES B. ENOCHS - DIRECTOR

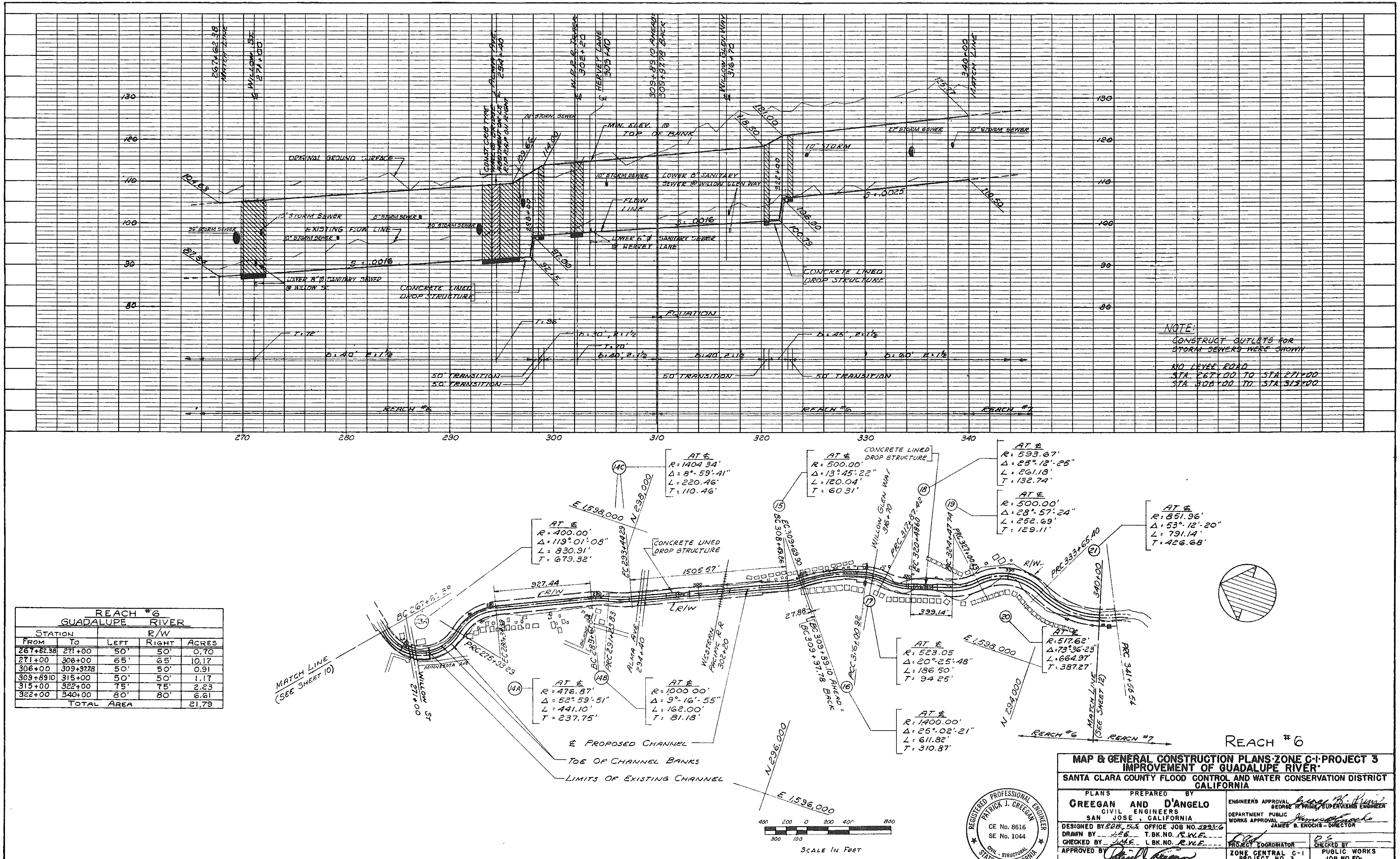
D.A.S. PROJECT COORDINATOR
D.S. CHECKED BY

ZONE CENTRAL C-1 PROJECT NO. 3
PUBLIC WORKS JOB NO FO-

DATE: 9/28/60
SCALE: HORIZ. 1" = 400' VERT. 1" = 10'

SHEET NO. 10 OF 16 SHEETS

PLATE NO. 10



REACH #6 GUADALUPE RIVER				
STATION		R/W		
FROM	TO	LEFT	RIGHT	ACRES
267+62.38	271+00	50'	50'	0.70
271+00	306+00	65'	65'	10.17
306+00	309+97.78	50'	50'	0.91
309+89.10	315+00	50'	50'	1.17
315+00	322+00	75'	75'	2.23
322+00	340+00	80'	80'	6.61
TOTAL AREA				21.79

REACH #6

MAP & GENERAL CONSTRUCTION PLANS · ZONE C-1 · PROJECT 3
IMPROVEMENT OF GUADALUPE RIVER ·

SANTA CLARA COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT
CALIFORNIA

PLANS PREPARED BY
CREEGAN AND D'ANGELO
CIVIL ENGINEERS
SAN JOSE, CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER
PATRICK J. CREEGAN
CE No. 8616
SE No. 1044
CIVIL · STRUCTURAL
STATE OF CALIFORNIA

DESIGNED BY R.D.H., V.L.S. OFFICE JOB NO. 5993-6
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CHECKED BY J.M.G. L. BK. NO. R.W.E.
APPROVED BY Patrick J. Creegan

ENGINEER'S APPROVAL George H. Prime
GEORGE H. PRIME, SUPERVISING ENGINEER
DEPARTMENT PUBLIC WORKS APPROVAL James B. Enochs
JAMES B. ENOCHS – DIRECTOR

E.A.D.
PROJECT COORDINATOR
D.S.
CHECKED BY

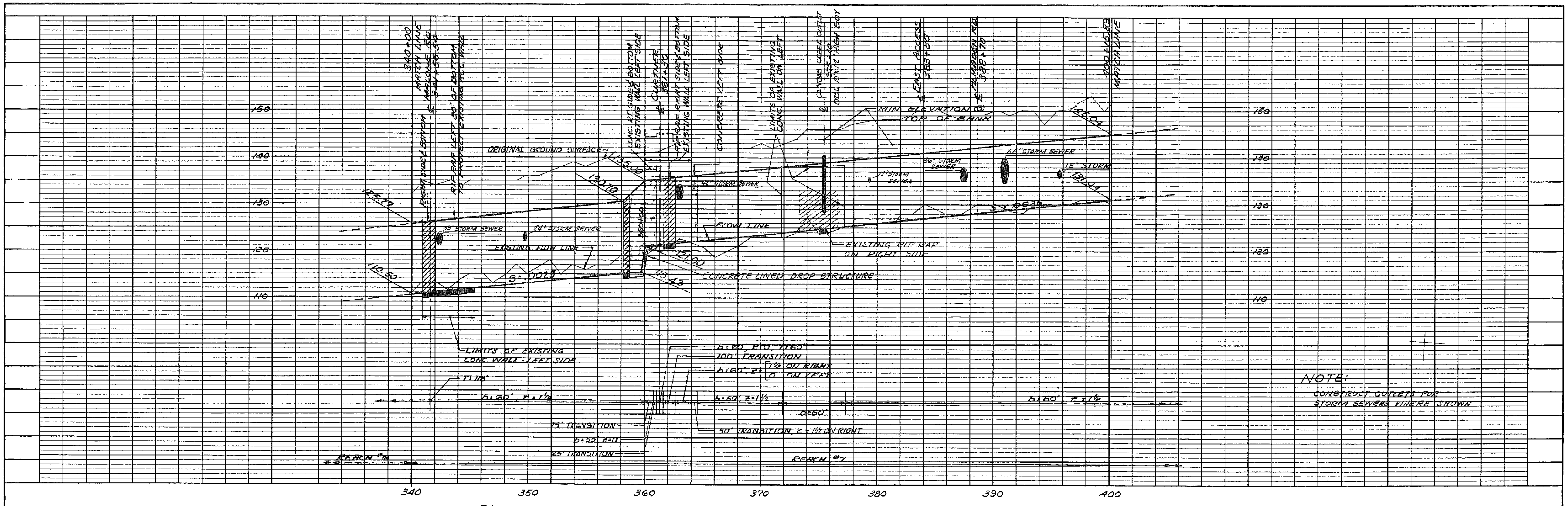
ZONE CENTRAL C-1
PROJECT NO. 3

PUBLIC WORKS
JOB NO. FC-

DATE: 3/28/60
SCALE: HORIZ. 1"=400' VERT. 1"=10'

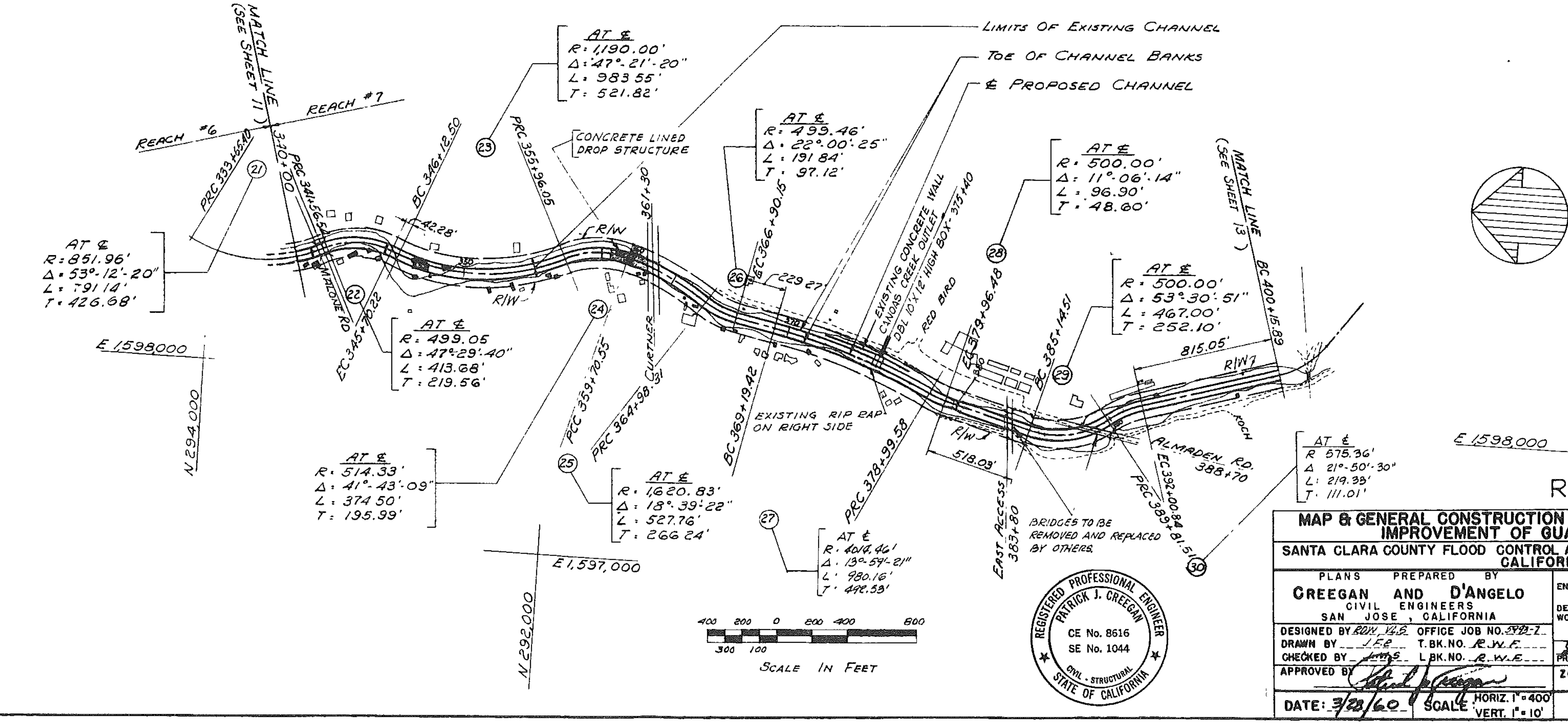
SHEET NO. 11 OF 16 SHEETS

PLATE NO. 11



NOTE:
CONSTRUCT OUTLETS FOR STORM SEWERS WHERE SHOWN

REACH #7 GUADALUPE RIVER				
STATION		R/W		
FROM	TO	LEFT	RIGHT	ACRES
340+00	344+00	80'	80'	1.27
344+00	385+00	85'	85'	15.70
385+00	400+15.89	76'	76'	4.87
TOTAL AREA				21.84


MATCH LINE (SEE SHEET 11)
REACH #6
REACH #7
340+00
PRC 333+65.10
PRC 341+56.54
MALONE RD
BC 346+12.50
EC 345+70.22
42.28'
PRC 355+96.05
CONCRETE LINED DROP STRUCTURE
R/W
361+30
CURTNER
PRC 359+70.55
PRC 364+98.31
BC 366+90.15
BC 369+19.42
229.27'
EXISTING RIP RAP ON RIGHT SIDE
EXISTING CONCRETE WALL
CANOAS CREEK OUTLET
DBL 10'X12' HIGH BOX - 375+40
RED BIRD
EC 379+96.48
PRC 378+99.58
518.03'
EAST ACCESS 383+80
BC 385+14.51
BRIDGES TO BE REMOVED AND REPLACED BY OTHERS
815.05'
R/W
ALMADEN RD. 388+70
EC 392+00.84
PRC 389+81.51
KOCH
BC 400+15.89
MATCH LINE (SEE SHEET 13)
LIMITS OF EXISTING CHANNEL
TOE OF CHANNEL BANKS
¢ PROPOSED CHANNEL
E 1,598,000
N 294,000
E 1,597,000
N 292,000
E 1,598,000
N 286,000
400 200 0 200 400 800
300 100
SCALE IN FEET
(21) AT ¢ R=851.96' Δ=53°-12'-20" L=791.14' T=426.68'
(22) AT ¢ R=499.05 Δ=47°-29'-40" L=413.68' T=219.56'
(23) AT ¢ R=1,190.00' Δ=47°-21'-20" L=983.55' T=521.82'
(24) AT ¢ R=514.33' Δ=41°-43'-09" L=374.50' T=195.99'
(25) AT ¢ R=1,620.83' Δ=18°-39'-22" L=527.76' T=266.24'
(26) AT ¢ R=499.46' Δ=22°-00'-25" L=191.84' T=97.12'
(27) AT ¢ R=4014.46' Δ=13°-59'-21" L=980.16' T=492.53'
(28) AT ¢ R=500.00' Δ=11°-06'-14" L=96.90' T=48.60'
(29) AT ¢ R=500.00' Δ=53°-30'-51" L=467.00' T=252.10'
(30) AT ¢ R 575.36' Δ 21°-50'-30" L=219.33' T=111.01'

REACH # 7

PATRICK J. CREEGAN
CE No. 8616
SE No. 1044

MAP & GENERAL CONSTRUCTION PLANS·ZONE C-I·PROJECT 3
IMPROVEMENT OF GUADALUPE RIVER

SANTA CLARA COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT
CALIFORNIA

PLANS PREPARED BY
CREEGAN AND D'ANGELO
CIVIL ENGINEERS
SAN JOSE, CALIFORNIA

DESIGNED BY RDW, V.A.S. OFFICE JOB NO. 599-7
DRAWN BY J.F.B. T.BK.NO. R.W.F.
CHECKED BY LMS L.BK.NO. R.W.F.
APPROVED BY Robert J. Creegan

ENGINEER'S APPROVAL George H. Prime
GEORGE H PRIME, SUPERVISING ENGINEER
DEPARTMENT PUBLIC WORKS APPROVAL James B. Enochs
JAMES B. ENOCHS - DIRECTOR

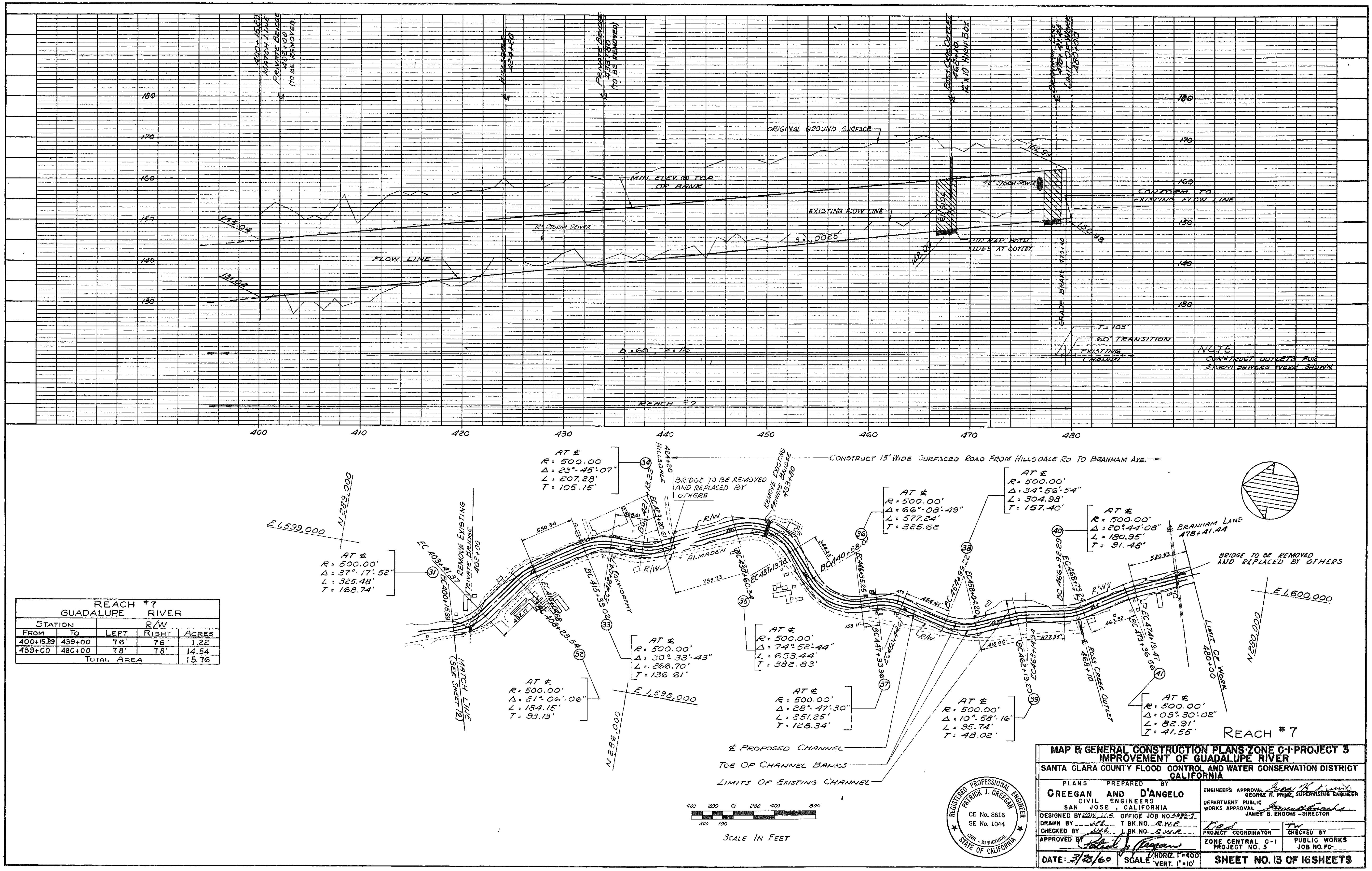
P.A.S. PROJECT COORDINATOR
DS - TW CHECKED BY

ZONE CENTRAL C-I PROJECT NO. 3
PUBLIC WORKS JOB NO. FC-

DATE: 3/28/60
SCALE: HORIZ. 1" = 400' VERT. 1" = 10'

SHEET NO. 12 OF 16 SHEETS

PLATE NO. 12



NOTE
CONSTRUCT OUTLETS FOR STORM SEWERS WERE SHOWN

㉛ AT ℄
R = 500.00'
Δ = 37°-17'-52"
L = 325.48'
T = 168.74'

㉜ AT ℄
R = 500.00'
Δ = 21°-06'-06"
L = 184.15'
T = 93.13'

㉝ AT ℄
R = 500.00'
Δ = 30°-33'-43"
L = 266.70'
T = 136.61'

㉞ AT ℄
R = 500.00
Δ = 23°-45'-07"
L = 207.28'
T = 105.15'

㉟ AT ℄
R = 500.00'
Δ = 74°-52'-44"
L = 653.44'
T = 382.83'

㊱ AT ℄
R = 500.00'
Δ = 66°-08'-49"
L = 577.24'
T = 325.62

㊲ AT ℄
R = 500.00'
Δ = 28°-47'-30"
L = 251.25'
T = 128.34'

㊳ AT ℄
R = 500.00'
Δ = 34°-56'-54"
L = 304.98'
T = 157.40'

㊴ AT ℄
R = 500.00'
Δ = 10°-58'-16"
L = 95.74'
T = 48.02'

㊵ AT ℄
R = 500.00'
Δ = 20°-44'-08"
L = 180.95'
T = 91.48'

㊶ AT ℄
R = 500.00'
Δ = 09°-30'-02"
L = 82.91'
T = 41.55'

REACH #7
GUADALUPE RIVER

STATION		R/W		
FROM	TO	LEFT	RIGHT	ACRES
400+15.89	439+00	76'	76'	1.22
439+00	480+00	78'	78'	14.54
TOTAL AREA				15.76

PATRICK J. CREEGAN
CE No. 8616
SE No. 1044

MAP & GENERAL CONSTRUCTION PLANS·ZONE C-1·PROJECT 3
IMPROVEMENT OF GUADALUPE RIVER
SANTA CLARA COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT
CALIFORNIA

PLANS PREPARED BY
CREEGAN AND D'ANGELO
CIVIL ENGINEERS
SAN JOSE, CALIFORNIA

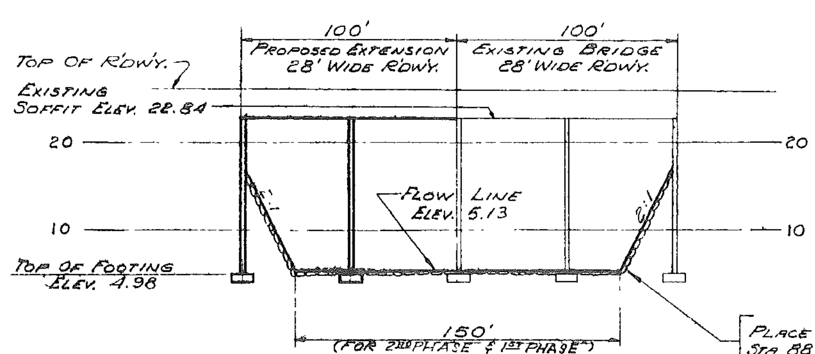
DESIGNED BY ZDW, JLS. OFFICE JOB NO. 5992-7
DRAWN BY JFE T BK. NO. R.W.E.
CHECKED BY AMS L.BK.NO. R.W.R.
APPROVED BY

ENGINEER'S APPROVAL
GEORGE H. PRIME, SUPERVISING ENGINEER
DEPARTMENT PUBLIC WORKS APPROVAL
JAMES B. ENOCHS - DIRECTOR

PROJECT COORDINATOR
TW
CHECKED BY
ZONE CENTRAL C-1 PROJECT NO. 3
PUBLIC WORKS JOB NO. FO-

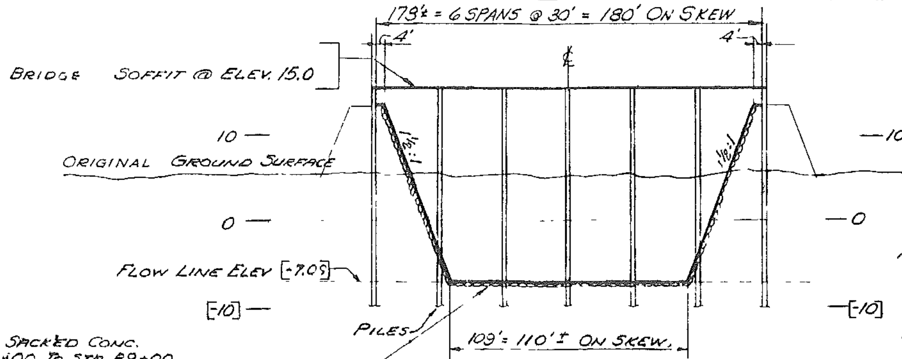
DATE: 3/28/60
SCALE: HORIZ. 1" = 400' VERT. 1" = 10'
SHEET NO. 13 OF 16 SHEETS

PLATE NO. 13


100'
100'
Proposed Extension 28' Wide R'dwy.
Existing Bridge 28' Wide R'dwy.
Top Of R'dwy.
Existing Soffit Elev. 22.84
20
20
Flow Line Elev. 5.13
2:1
2:1
10
10
Top Of Footing Elev. 4.98
150' (For 2nd Phase & 1st Phase)
Place Sacked Conc. Sta 88+00 To Sta. 89+00

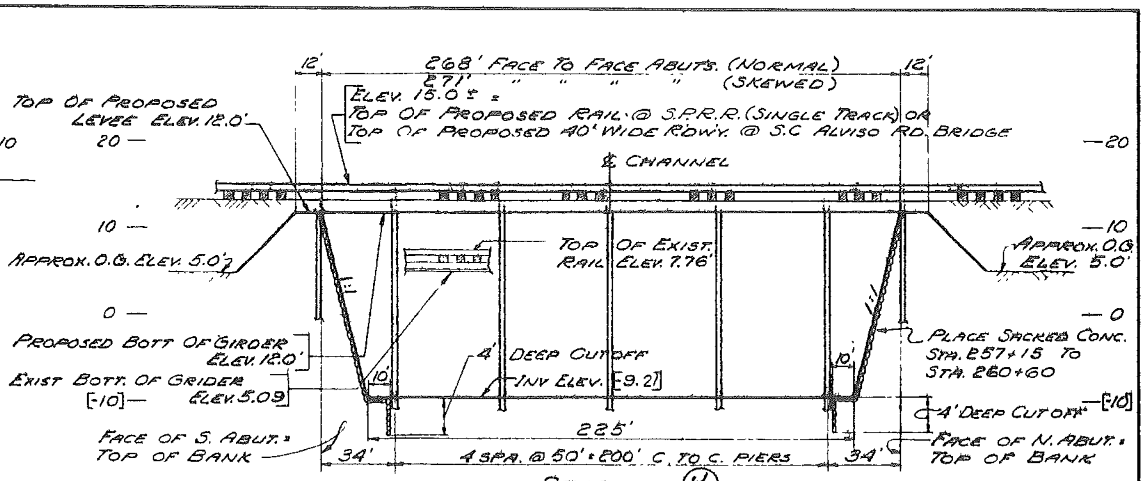
SECTION A/14

STATION 88+71.39
MONTAGUE ROAD BRIDGE


179'± = 6 Spans @ 30' = 180' On Skew
4'
4'
℄
Bridge Soffit @ Elev. 15.0
10
Original Ground Surface
1½:1
1½:1
0
Flow Line Elev [-7.09]
[-10]
10
0
[-10]
Piles
109'= 110'± On Skew.
Place Sacked Conc Sta 213+00 To Sta 219+00

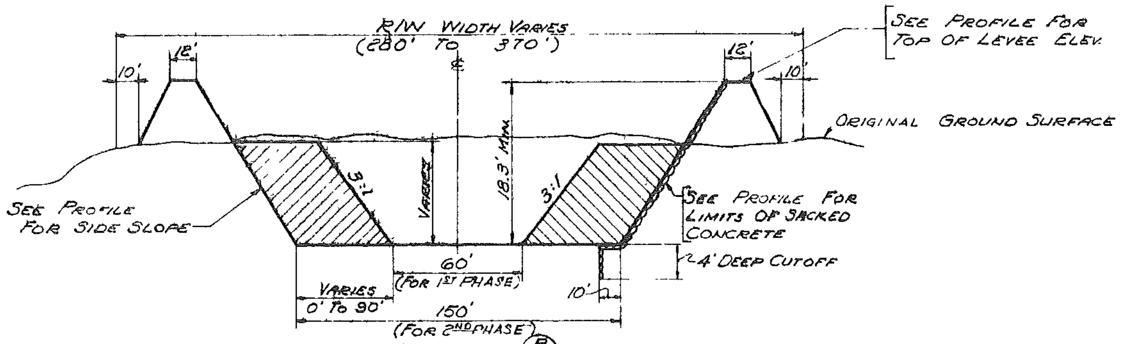
SECTION E/14

STATION 216+80
STATE HIGHWAY ROUTE 113A BRIDGE


12'
268' Face To Face Abuts. (Normal)
271' " " " " (Skewed)
12'
Elev. 15.0'± = Top Of Proposed Rail @ S.P.R.R. (Single Track) Or Top Of Proposed 40' Wide R'dwy. @ S.C Alviso Rd. Bridge
Top Of Proposed Levee Elev. 12.0'
20
20
℄ Channel
10
10
Approx. O.G. Elev. 5.0'
Approx. O.G. Elev. 5.0'
Top Of Exist. Rail Elev. 7.76'
1:1
1:1
0
0
Proposed Bott Of Girder Elev. 12.0'
Exist Bott. Of Grider Elev. 5.09
[-10]
[-10]
4' Deep Cutoff
Inv Elev. [-9.2]
10'
10'
Place Sacked Conc. Sta. 257+15 To Sta. 260+60
4' Deep Cutoff
225'
Face Of S. Abut. = Top Of Bank
34'
4 Spa. @ 50' = 200' C. To C. Piers
34'
Face Of N. Abut. = Top Of Bank

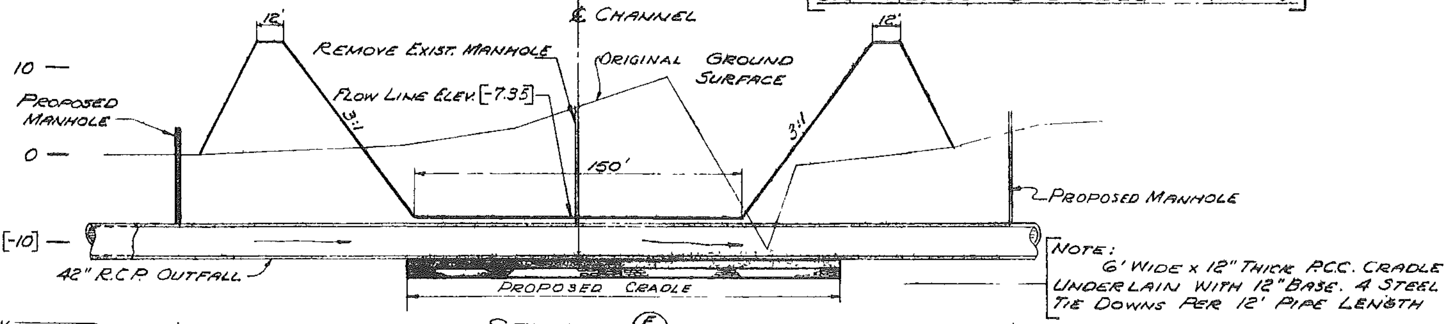
SECTION J/14

STA. 259+10 SOUTHERN PACIFIC R.R.
S.C.-ALVISO RD BRIDGE SIMILAR


R/W Width Varies (280' To 370')
12'
12'
10'
10'
℄
See Profile For Top Of Levee Elev.
Original Ground Surface
Varies
18.3' Min.
3:1
3:1
See Profile For Side Slope
See Profile For Limits Of Sacked Concrete
4' Deep Cutoff
60' (For 1st Phase)
Varies 0' To 90'
10'
150' (For 2nd Phase)

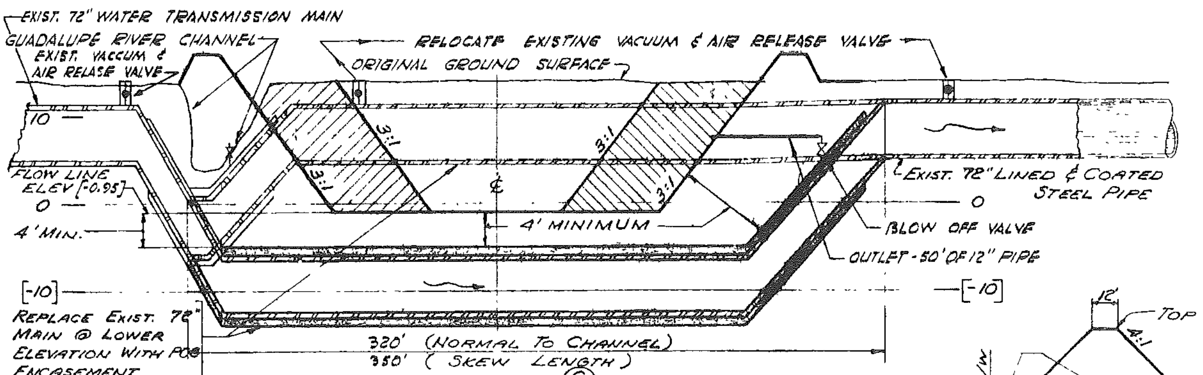
SECTION B/14

STA. 88+00 TO STA. 223+70



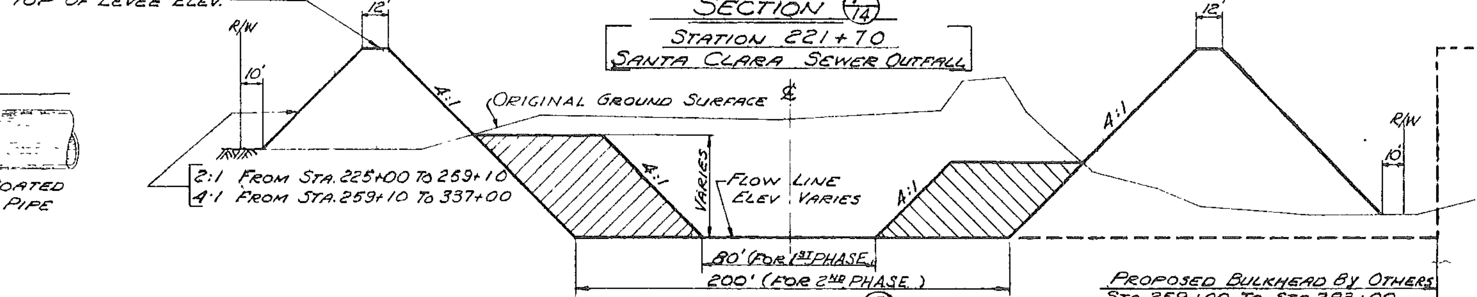
SECTION F/14

STATION 221+70
SANTA CLARA SEWER OUTFALL


Exist. 72" Water Transmission Main
Guadalupe River Channel
Exist. Vaccum & Air Relase Valve
Relocate Existing Vacuum & Air Release Valve
Original Ground Surface
10
3:1
3:1
3:1
3:1
Flow Line Elev [-0.95]
0
℄
Exist. 72" Lined & Coated Steel Pipe
0
4' Min.
4' Minimum
Blow Off Valve
Outlet - 50' Of 12" Pipe
[-10]
[-10]
Replace Exist. 72" Main @ Lower Elevation With PCC Encasement.
320' (Normal To Channel)
350' (Skew Length)

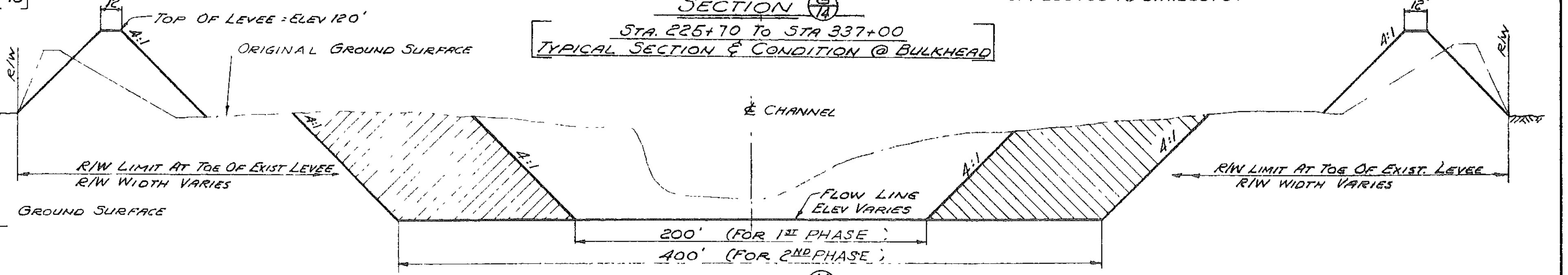
SECTION C/14

STA. 146+00 - 72" WATER TRANSMISSION MAIN CROSSING


See Profile For Top Of Levee Elev.
12'
12'
R/W
10'
4:1
Original Ground Surface
℄
2:1 From Sta. 225+00 To 259+10
4:1 From Sta. 259+10 To 337+00
4:1
Varies
Flow Line Elev Varies
4:1
4:1
R/W
10'
80' (For 1st Phase)
200' (For 2nd Phase)
Proposed Bulkhead By Others Sta 259+00 To Sta. 283+00

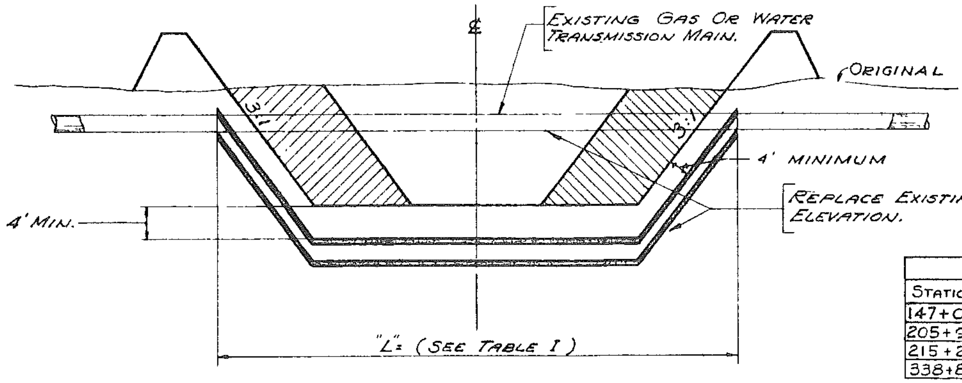
SECTION G/14

STA. 225+70 TO STA 337+00
TYPICAL SECTION & CONDITION @ BULKHEAD



SECTION H/14

STA 352+45 TO 470+00±
TYPICAL SECTION


℄
Existing Gas Or Water Transmission Main.
Original Ground Surface
3:1
3:1
4' Minimum
Replace Existing Main @ Lower Elevation.
4' Min.
"L" = (See Table I)

SECTION D/14

TABLE I			
STATION	TYPE	SIZE	"L"
147+00	GAS	24"	240
205+90	GAS	22"	280
215+20	GAS	30"	230
338+80	WATER	14"	360

PATRICK J. CREEGAN
CE No. 8616
SE No. 1044

NOTE:
ALL SECTIONS LOOKING DOWNSTREAM.

MAP & GENERAL CONSTRUCTION PLANS·ZONE C-1·PROJECT 3
IMPROVEMENT OF GUADALUPE RIVER

SANTA CLARA COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT
CALIFORNIA

PLANS PREPARED BY
CREEGAN AND D'ANGELO
CIVIL ENGINEERS
SAN JOSE, CALIFORNIA

DESIGNED BY RDW OFFICE JOB NO. 2723-7
DRAWN BY JFE T. BK. NO. ______
CHECKED BY JMB L. BK NO. ______
APPROVED BY Patrick J. Creegan

DATE: 9/28/60 SCALE: HORIZ. 1"=40' VERT. 1"=10'

ENGINEER'S APPROVAL George H. Prime
GEORGE H. PRIME, SUPERVISING ENGINEER

DEPARTMENT PUBLIC WORKS APPROVAL James B. Enochs
JAMES B. ENOCHS - DIRECTOR

EGA
PROJECT COORDINATOR

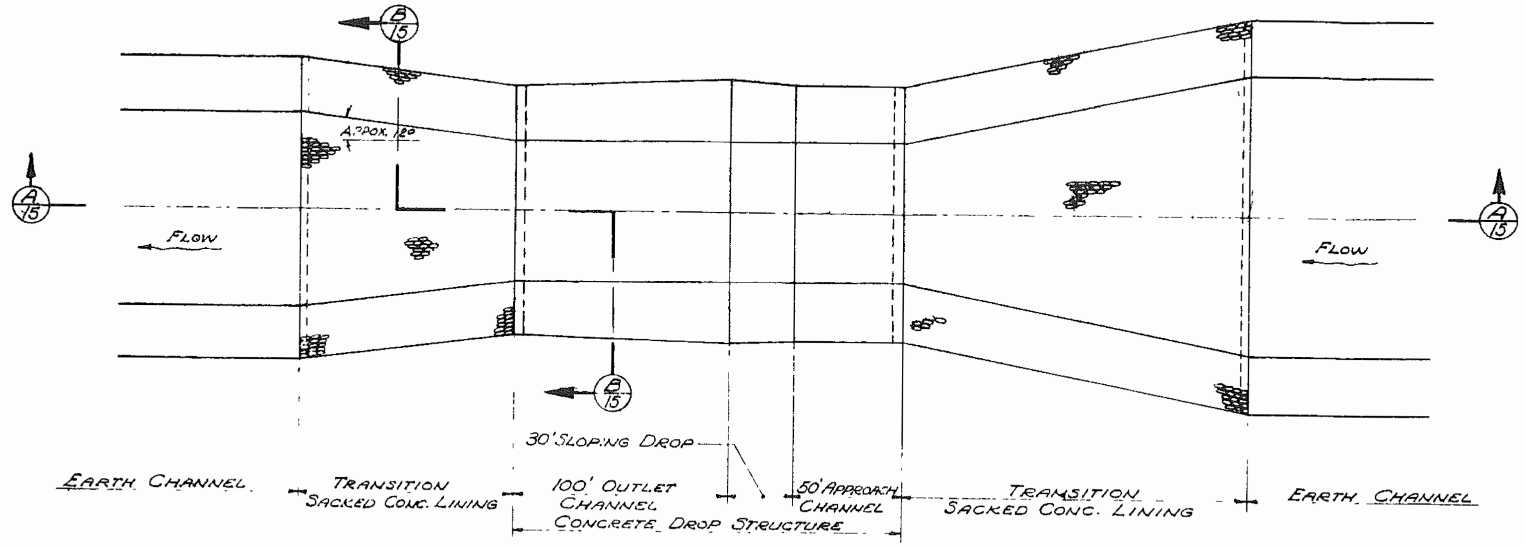
DS
CHECKED BY

ZONE CENTRAL C-1 PROJECT NO. 3

PUBLIC WORKS JOB NO. FO-___

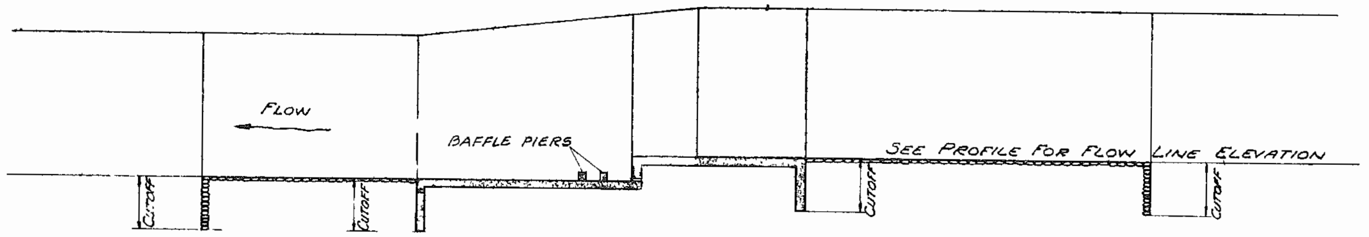
SHEET NO. 14 OF 16 SHEETS

PLATE NO. 14

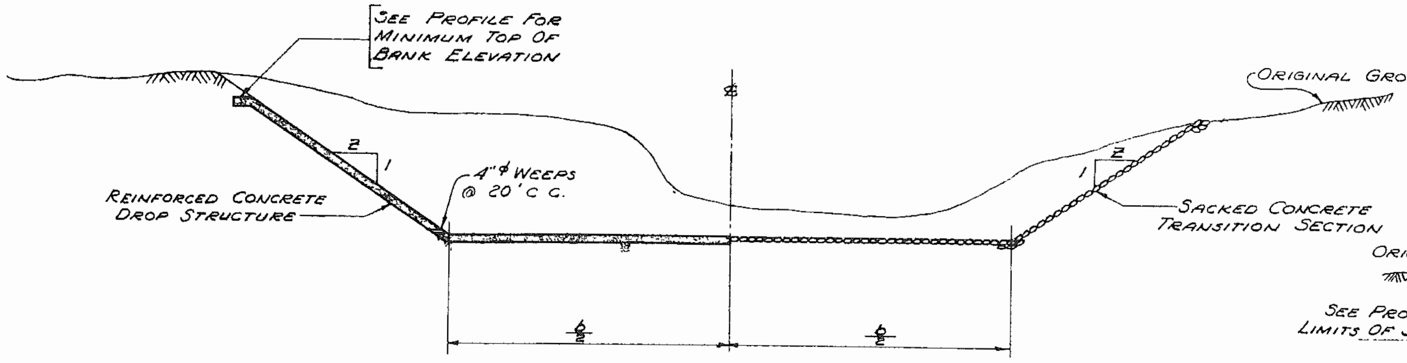


PLAN
SCALE: 1" = 40'

NOTE:
FOR "B" AND "Z" DIMENSIONS SEE PROFILE SHEETS.

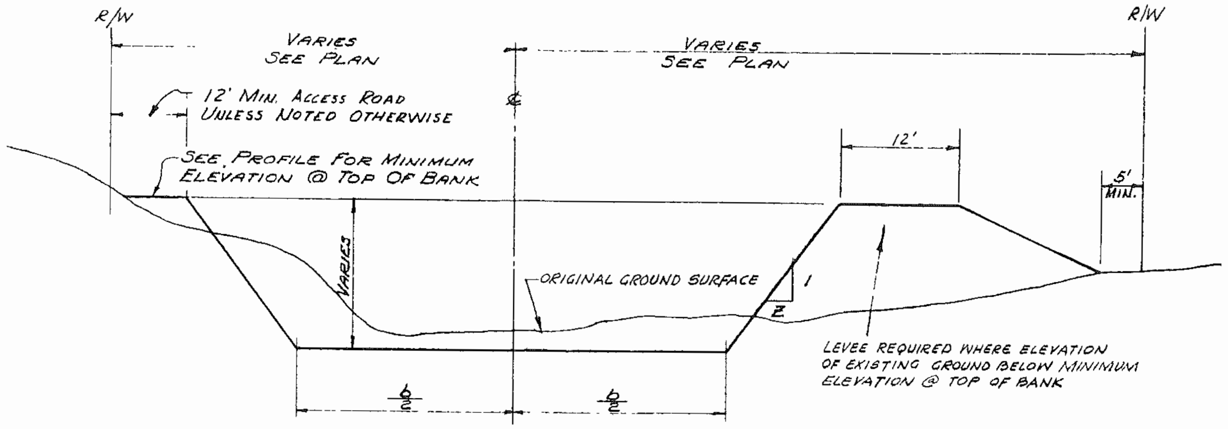


LONGITUDINAL SECTION A/15
SCALE: HORZ. 1" = 40'
VERT. 1" = 10'

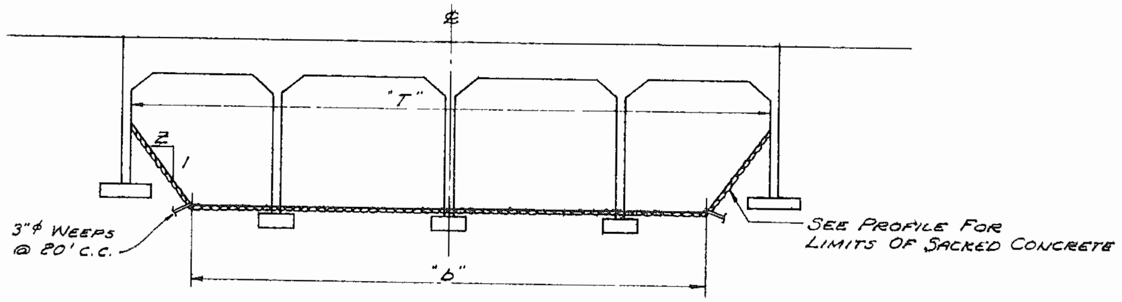

SEE PROFILE FOR MINIMUM TOP OF BANK ELEVATION
℄
ORIGINAL GROUND SURFACE
2
1
4"φ WEEPS @ 20' C.C.
REINFORCED CONCRETE DROP STRUCTURE
2
1
SACKED CONCRETE TRANSITION SECTION
b/2
b/2

SECTION B/15
SCALE: 1" = 10'

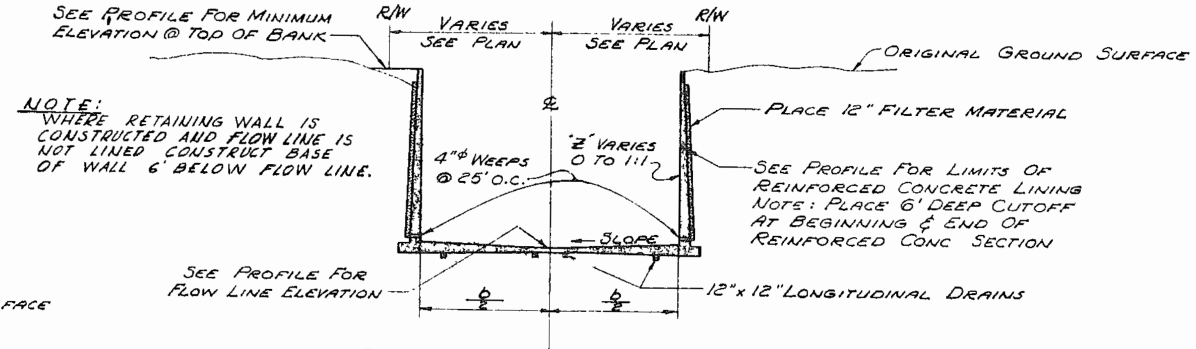
TYPICAL DROP STRUCTURE
(SEE PROFILE FOR DIMENSIONS)


R/W
R/W
VARIES SEE PLAN
VARIES SEE PLAN
12' MIN. ACCESS ROAD UNLESS NOTED OTHERWISE
℄
SEE PROFILE FOR MINIMUM ELEVATION @ TOP OF BANK
12'
5' MIN.
VARIES
ORIGINAL GROUND SURFACE
1
2
LEVEE REQUIRED WHERE ELEVATION OF EXISTING GROUND BELOW MINIMUM ELEVATION @ TOP OF BANK
b/2
b/2

TYPICAL SECTION
RIVER CHANNEL
(NOT TO SCALE - SEE PROFILE FOR DIM'S.)

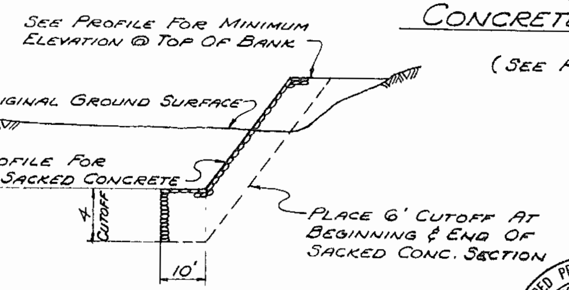


TYPICAL SECTION
AT BRIDGE WITH SACKED CONCRETE
(NOT TO SCALE - SEE PROFILE FOR DIM'S)


SEE PROFILE FOR MINIMUM ELEVATION @ TOP OF BANK
R/W
R/W
VARIES SEE PLAN
VARIES SEE PLAN
ORIGINAL GROUND SURFACE
℄
PLACE 12" FILTER MATERIAL
4"φ WEEPS @ 25' O.C.
"Z" VARIES 0 TO 1:1
SEE PROFILE FOR LIMITS OF REINFORCED CONCRETE LINING
NOTE: PLACE 6' DEEP CUTOFF AT BEGINNING & END OF REINFORCED CONC SECTION
SLOPE
SEE PROFILE FOR FLOW LINE ELEVATION
b/2
b/2
12"x 12" LONGITUDINAL DRAINS

NOTE:
WHERE RETAINING WALL IS CONSTRUCTED AND FLOW LINE IS NOT LINED CONSTRUCT BASE OF WALL 6' BELOW FLOW LINE.

TYPICAL SECTION
CONCRETE LINED CHANNEL
SCALE: 1" = 20'
(SEE PROFILE FOR DIMENSIONS)


SEE PROFILE FOR MINIMUM ELEVATION @ TOP OF BANK
ORIGINAL GROUND SURFACE
SEE PROFILE FOR LIMITS OF SACKED CONCRETE
4' CUTOFF
PLACE 6' CUTOFF AT BEGINNING & END OF SACKED CONC. SECTION
10'

TYPICAL SECTION
WITH SACKED CONCRETE RIPRAP ON SIDE ONLY
NOT TO SCALE

PATRICK J. CREEGAN
CE No. 8616
SE No. 1044

MAP & GENERAL CONSTRUCTION PLANS·ZONE C-1·PROJECT 3
IMPROVEMENT OF GUADALUPE RIVER
SANTA CLARA COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT
CALIFORNIA

PLANS PREPARED BY
CREEGAN AND D'ANGELO
CIVIL ENGINEERS
SAN JOSE, CALIFORNIA

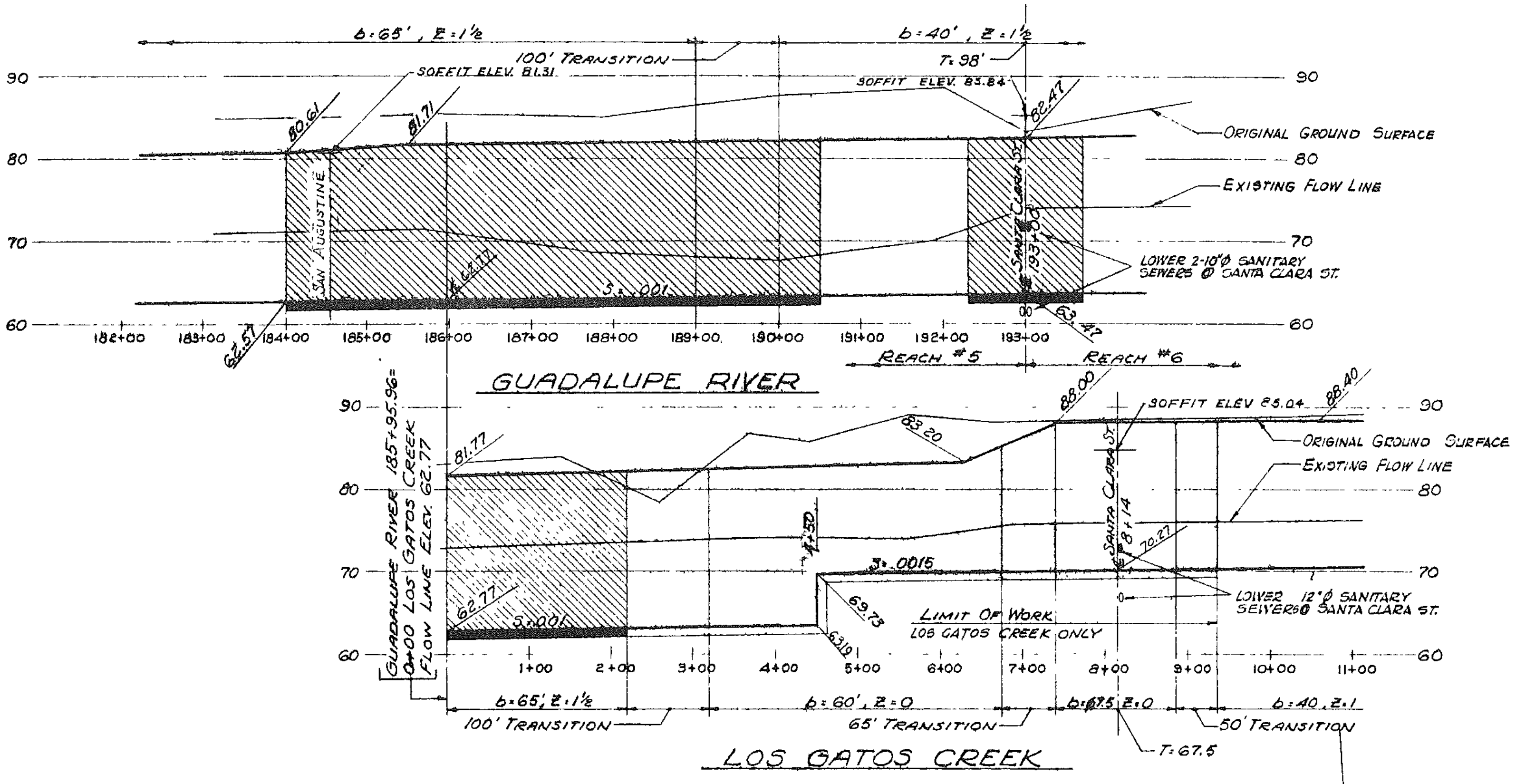
DESIGNED BY RDW, RMD OFFICE JOB NO. 5993-7
DRAWN BY J.F.E. T.BK.NO.
CHECKED BY LMS L.BK.NO.
APPROVED BY Patrick J. Creegan

ENGINEER'S APPROVAL Geo. N. Prime
GEORGE N. PRIME, SUPERVISING ENGINEER
DEPARTMENT PUBLIC WORKS APPROVAL James B. Enochs
JAMES B. ENOCHS – DIRECTOR

PROJECT COORDINATOR
CHECKED BY D.S.
ZONE CENTRAL C-1 PROJECT NO. 3
PUBLIC WORKS JOB NO. PO-

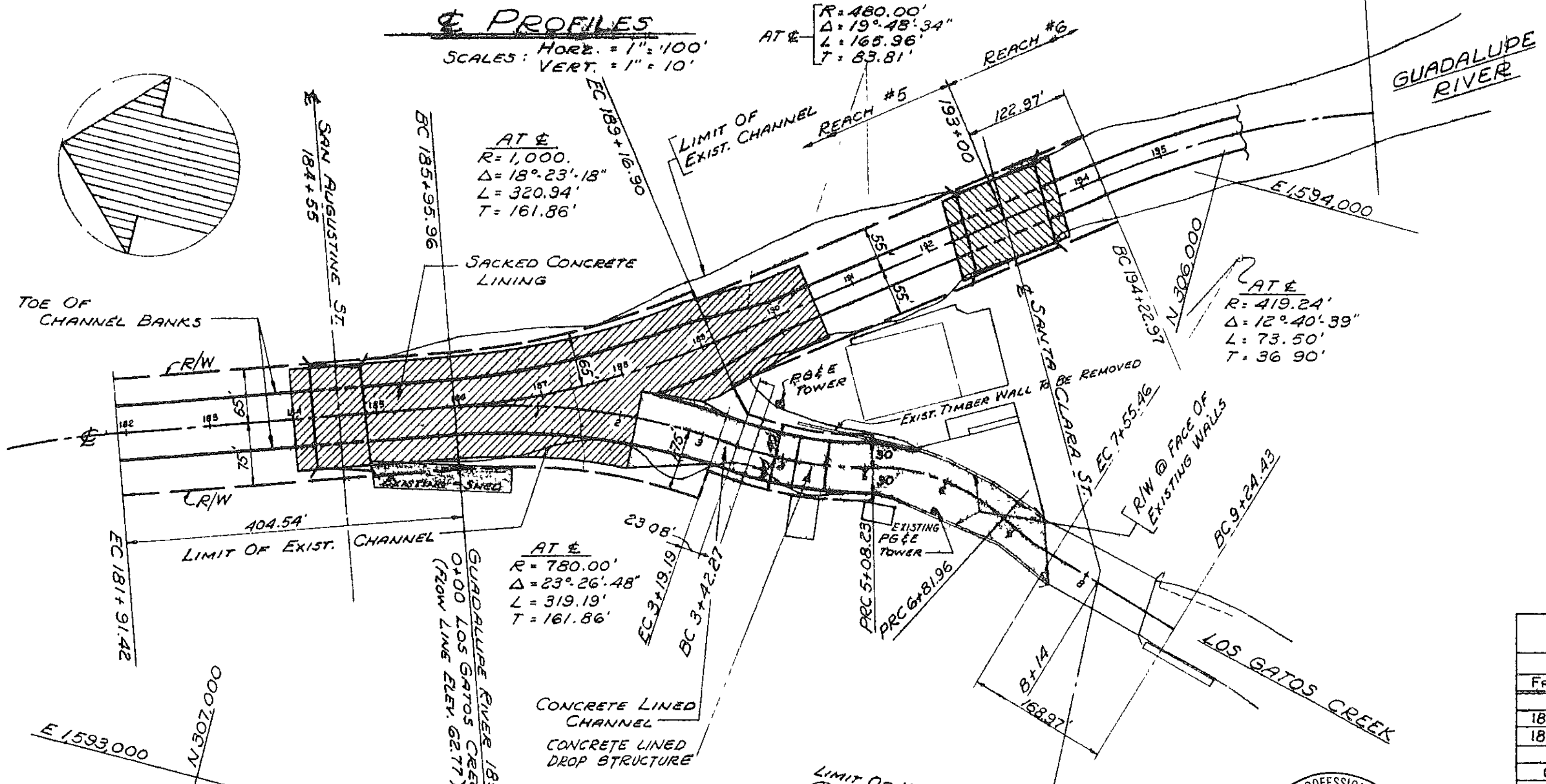
DATE: 3/28/60
SCALE: AS NOTED
SHEET NO. 15 OF 16 SHEETS

PLATE NO. 15



℄ PROFILES

SCALES: HORZ. = 1" = 100'
VERT. = 1" = 10'


AT ℄ R=480.00' Δ=19°-48'-34" L=165.96' T=83.81'
AT ℄ R=1,000. Δ=18°-23'-18" L=320.94' T=161.86'
AT ℄ R=419.24' Δ=12°-40'-39" L=73.50' T=36.90'
AT ℄ R=780.00' Δ=23°-26'-48" L=319.19' T=161.86'
℄ SAN AUGUSTINE ST. 184+55
BC 185+95.96
EC 189+16.90
LIMIT OF EXIST. CHANNEL
REACH #5
REACH #6
193+00
122.97'
GUADALUPE RIVER
E 1,594,000
BC 194+22.97
N 306,000
SACKED CONCRETE LINING
TOE OF CHANNEL BANKS
R/W
PG&E TOWER
EXIST. TIMBER WALL TO BE REMOVED
℄ SANTA CLARA ST.
EC 7+55.46
R/W @ FACE OF EXISTING WALLS
BC 9+24.43
404.54'
LIMIT OF EXIST. CHANNEL
EC 181+91.42
GUADALUPE RIVER 185+95.96= 0+00 LOS GATOS CREEK (FLOW LINE ELEV. 62.77)
23.08'
EC 3+19.19
BC 3+42.27
EXISTING PG&E TOWER
PRC 5+08.23
PRC 6+81.96
8+14
168.97'
LOS GATOS CREEK
CONCRETE LINED CHANNEL
CONCRETE LINED DROP STRUCTURE
LIMIT OF WORK LOS GATOS CREEK ONLY
E 1,593,000
N 307,000

DETAIL 1/16

CONFLUENCE OF GUADALUPE RIVER & LOS GATOS CREEK

SCALE 1"=100'

REACH #5 GUADALUPE RIVER				
STATION		R/W		
FROM	TO	LEFT	RIGHT	ACRES
GUADALUPE RIVER				
185+95.96	189+16.90	65'	VARIES	0.6
189+16.90	193+00	55'	55'	0.9
LOS GATOS CREEK				
0+00	3+19.19	VARIES	75'	0.7
3+19.19	5+08.23	40'	40'	0.3
5+08.23	8+14	*	*	0,3
TOTAL AREA				2.8

* FACE OF EXISTING WALL

PATRICK J. CREEGAN
CE No. 8616
SE No. 1044
CIVIL - STRUCTURAL

MAP & GENERAL CONSTRUCTION PLANS·ZONE C-1·PROJECT 3
IMPROVEMENT OF GUADALUPE RIVER

SANTA CLARA COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT
CALIFORNIA

PLANS PREPARED BY
CREEGAN AND D'ANGELO
CIVIL ENGINEERS
SAN JOSE, CALIFORNIA

ENGINEER'S APPROVAL
GEORGE H. [illegible], SUPERVISING ENGINEER

DEPARTMENT PUBLIC WORKS APPROVAL
JAMES B. ENOCHS - DIRECTOR

DESIGNED BY RDW, RMD OFFICE JOB NO. [illegible]
DRAWN BY JAE T.BK.NO.
CHECKED BY JNS L.BK.NO.

PROJECT COORDINATOR
CHECKED BY DS

APPROVED BY

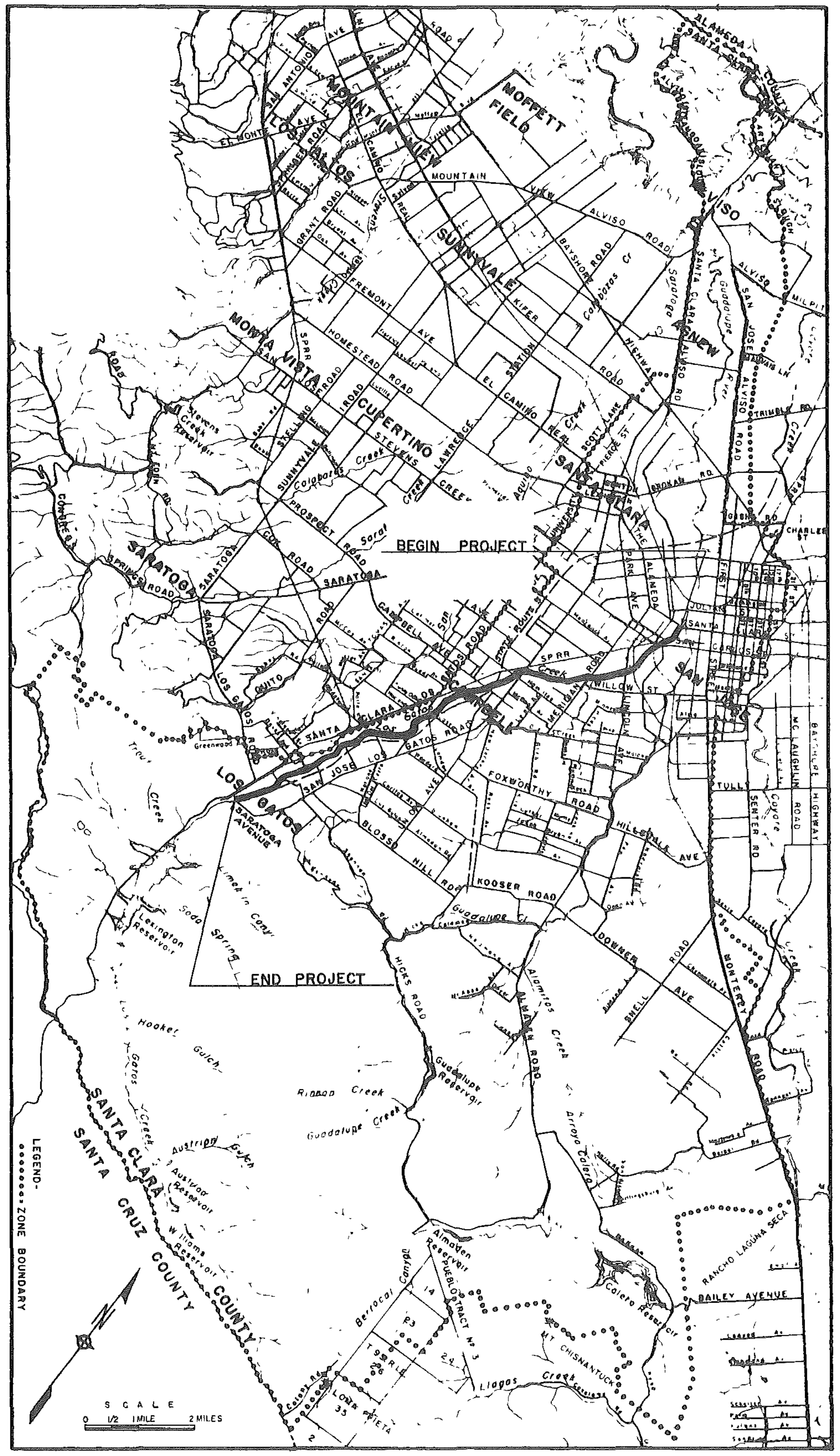
ZONE CENTRAL C-1 PROJECT NO. 3

PUBLIC WORKS JOB NO. FO-

DATE: 3/28/60 SCALE: AS NOTED

SHEET NO. 16 OF 16 SHEETS

PLATE NO. 16



MAP

AND

GENERAL CONSTRUCTION PLANS

OF

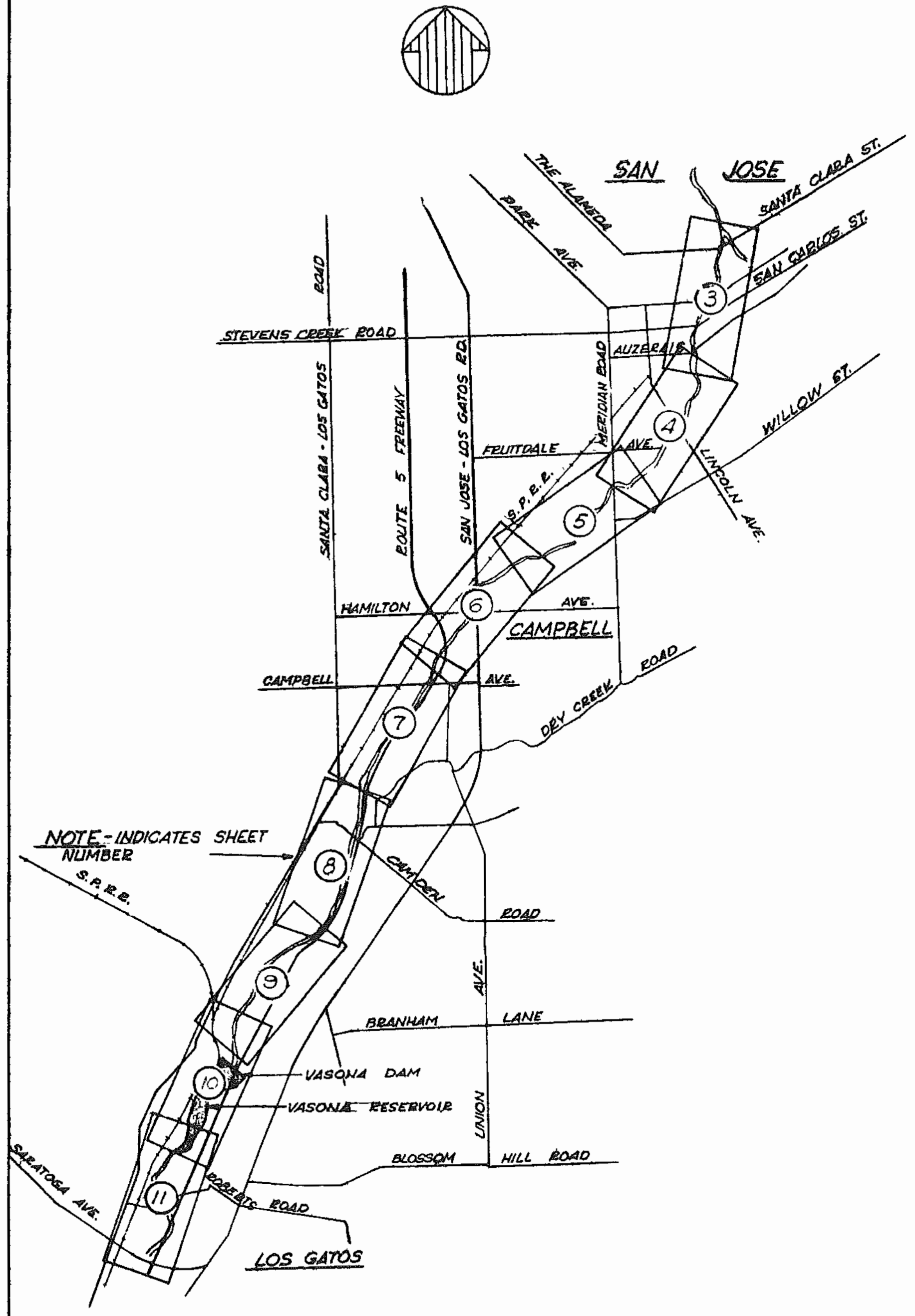
ZONE C-I (CENTRAL) PROJECT NO. 8

LOS GATOS CREEK IMPROVEMENT

SANTA CLARA STREET TO SARATOGA AVENUE

SANTA CLARA COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT

SANTA CLARA COUNTY, CALIFORNIA



LOCATION MAP AND INDEX TO PLANS AND PROFILES

SCALE - 0 ¼ ½ ¾ 1 1½

LEGEND

EXISTING WORKS

BRIDGE	═╫═
FENCE	—×—×—
RAILROAD	┼┼┼┼┼┼
ROADWAY	═══
LEVEE	╍╍╍
BUILDING	☐
BUILDING WITHIN R/W	■

PROPOSED WORKS

SACKED CONCRETE RIP RAP ~ SIDES ONLY	▨
SACKED CONCRETE RIP RAP ~ SIDES & BOTTOM	▨
CONCRETE CHANNEL LINING	░
CENTER LINE OF CHANNEL	—

GENERAL NOTES

1. GUADALUPE RIVER COORDINATES ARE BASED ON CALIFORNIA COORDINATE SYSTEM. COORDINATES BEYOND STA. 2700 ON LOS GATOS CREEK ARE BASED ON SURVEYS MADE BY THE S.C.C.F.C. & W.C.D.
2. ELEVATIONS ARE BASED ON U.S.C.&G.S DATUM OF 1954.
3. LOCATION OF STORM AND SANITARY FACILITIES ARE APPROXIMATE.
4. ALL CURVE DATA IS TO ℄
5. WHERE LEVEES ARE ABOVE EXISTING GROUND LEVEL SIDE DITCHES WILL PROVIDE FOR LOCAL DRAINAGE. DRAINAGE WILL BE CARRIED THROUGH LEVEE BY DRAINAGE PIPES AT STRATEGIC POINTS.
6. REINFORCED CONCRETE LINING MAY BE SUBSTITUTED FOR SACKED RIP RAP ON CONSTRUCTION PLANS

ABBREVIATIONS

WIDTH OF CHANNEL BOTTOM	b
SLOPE OF CHANNEL SIDES	Z
TOP WIDTH OF CHANNEL AT BRIDGE	T
CUBIC FEET PER SECOND	C.F.S.
RIGHT OF WAY	R/W
BEGIN CURVE	BC
END CURVE	EC
POINT OF REVERSE CURVE	PRC
RADIUS	R
CENTRAL ANGLE	Δ
LENGTH OF CURVE	L
TANGENT DISTANCE	T
CENTER LINE	℄
CORRUGATED METAL PIPE	C.M.P
STAND PIPE	SP

INDEX

TITLE	SHEET
LOCATION MAP	1
INDEX, LEGEND, ABBREVIATIONS	2
PLAN AND PROFILE	3-11
TYPICAL SECTIONS	12

MAP & GENERAL CONSTRUCTION PLANS·ZONE C-1·PROJECT 8
IMPROVEMENT OF LOS GATOS CREEK

SANTA CLARA COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT
CALIFORNIA

PLANS PREPARED BY
CREEGAN AND D'ANGELO
CIVIL ENGINEERS
SAN JOSE, CALIFORNIA

DESIGNED BY W.S. OFFICE JOB NO. 59124
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CHECKED BY L.BK.NO.
APPROVED BY Creegan

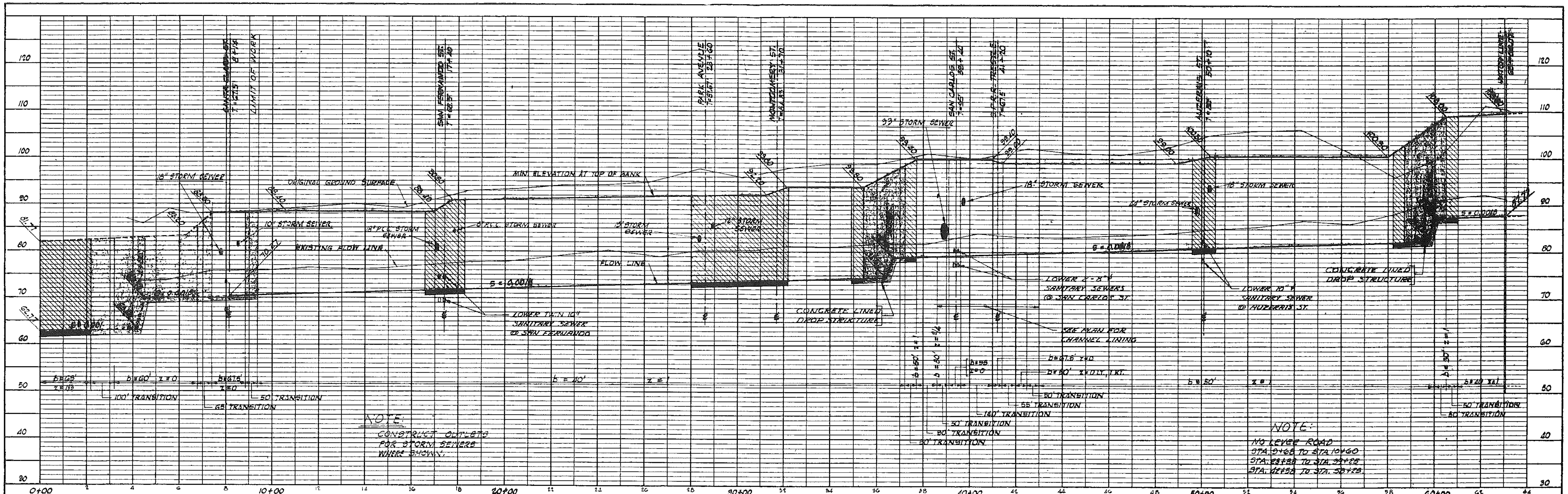
ENGINEER'S APPROVAL George H. Prime
GEORGE H PRIME, SUPERVISING ENGINEER
DEPARTMENT PUBLIC WORKS APPROVAL James B. Enochs
JAMES B. ENOCHS DIRECTOR

PROJECT COORDINATOR
CHECKED BY

ZONE CENTRAL C-1 PROJECT NO. 8
PUBLIC WORKS JOB NO. FO-

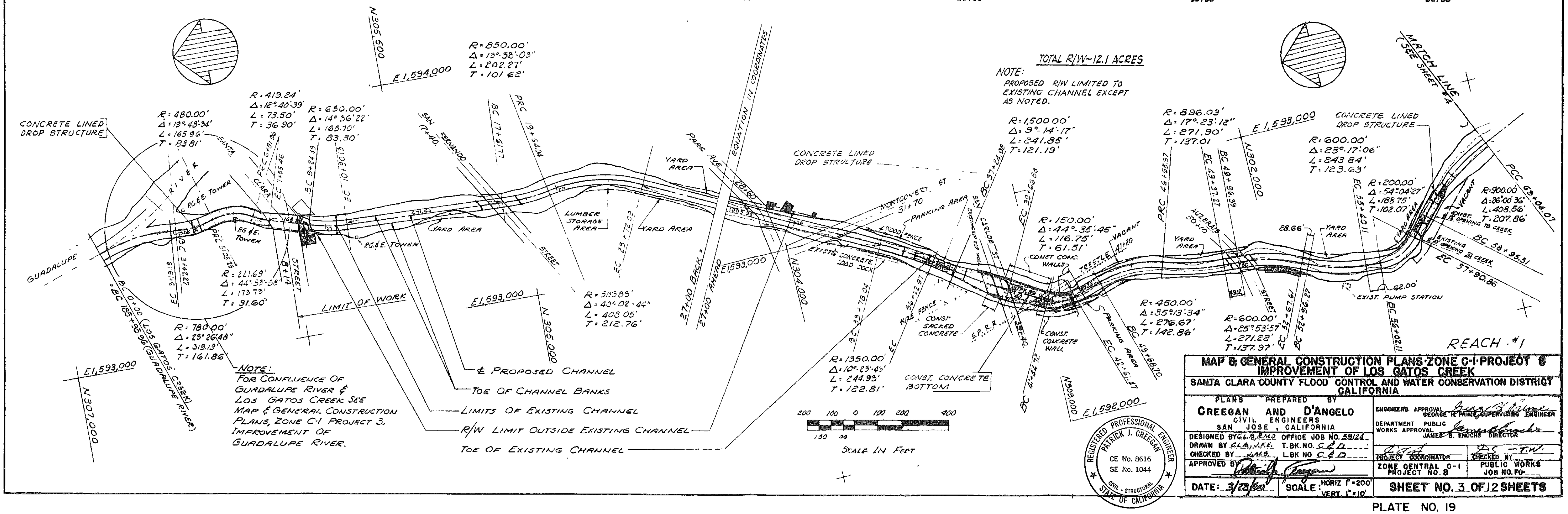
DATE: 3/28/60 SCALE: AS NOTED
SHEET NO. 2 OF 12 SHEETS

PLATE NO. 18



NOTE:
CONSTRUCT OUTLETS FOR STORM SEWERS WHERE SHOWN.

NOTE:
NO LEVEE ROAD
STA. 9+68 TO STA. 10+60
STA. 29+38 TO STA. 33+25
STA. 42+58 TO STA. 50+25



TOTAL R/W-12.1 ACRES

NOTE:
PROPOSED R/W LIMITED TO EXISTING CHANNEL EXCEPT AS NOTED.

NOTE:
FOR CONFLUENCE OF GUADALUPE RIVER & LOS GATOS CREEK SEE MAP & GENERAL CONSTRUCTION PLANS, ZONE C-1 PROJECT 3, IMPROVEMENT OF GUADALUPE RIVER.

REACH #1

PATRICK J. CREEGAN
CE No. 8616
SE No. 1044

MAP & GENERAL CONSTRUCTION PLANS·ZONE C-1·PROJECT 8
IMPROVEMENT OF LOS GATOS CREEK

SANTA CLARA COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT
CALIFORNIA

PLANS PREPARED BY
CREEGAN AND D'ANGELO
CIVIL ENGINEERS
SAN JOSE, CALIFORNIA

DESIGNED BY C.L.B., R.M.D. OFFICE JOB NO. 59/24
DRAWN BY C.L.B., J.F.E. T.BK.NO. C & D
CHECKED BY J.M.S. LBK NO C & D
APPROVED BY Patrick J. Creegan

DATE: 3/28/60 SCALE: HORIZ 1" = 200' VERT. 1" = 10'

ENGINEER'S APPROVAL George H. Prime
GEORGE H. PRIME, SUPERVISING ENGINEER

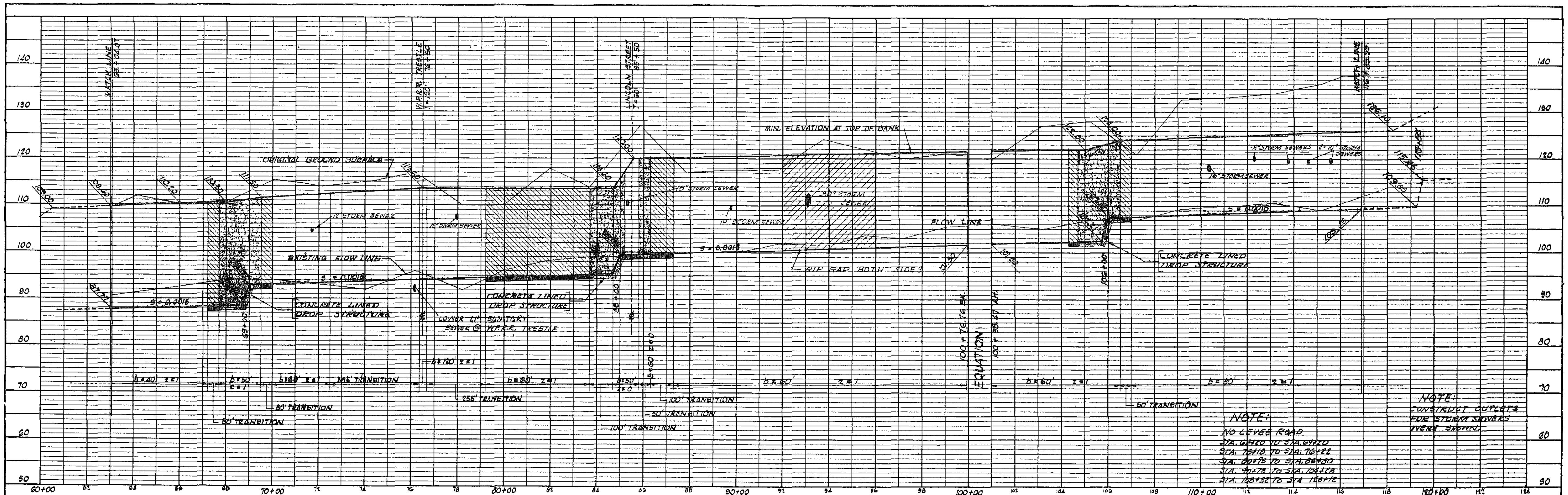
DEPARTMENT PUBLIC WORKS APPROVAL James B. Enochs
JAMES B. ENOCHS DIRECTOR

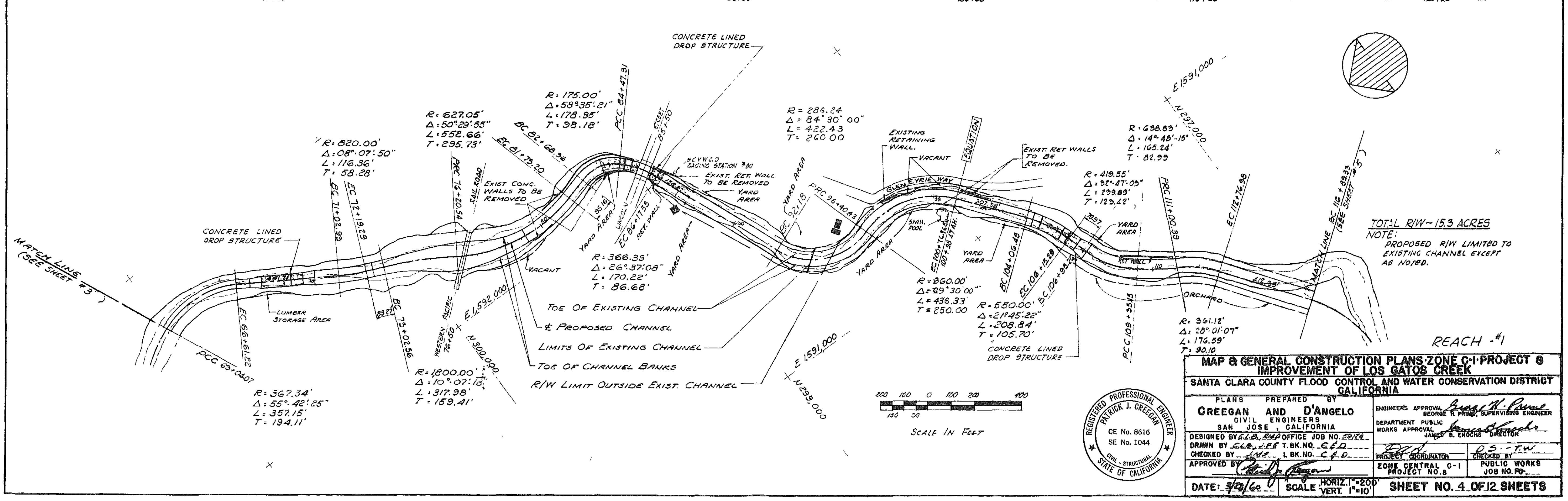
PROJECT COORDINATOR
CHECKED BY D.S. - T.W.

ZONE CENTRAL C-1
PROJECT NO. 8

PUBLIC WORKS
JOB NO. FO-

SHEET NO. 3 OF 12 SHEETS





MAP & GENERAL CONSTRUCTION PLANS·ZONE C-1·PROJECT 8
IMPROVEMENT OF LOS GATOS CREEK

SANTA CLARA COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT
CALIFORNIA

PLANS PREPARED BY
CREEGAN AND D'ANGELO
CIVIL ENGINEERS
SAN JOSE, CALIFORNIA

DESIGNED BY G.L.B., RMA OFFICE JOB NO. 59124
DRAWN BY G.L.B., J.F.F. T. BK. NO. C.F.D.
CHECKED BY J.M.S. L BK. NO. C.F.D.
APPROVED BY Patrick J. Creegan

CE No. 8616
SE No. 1044

ENGINEER'S APPROVAL George H. Prime
GEORGE H. PRIME, SUPERVISING ENGINEER
DEPARTMENT PUBLIC WORKS APPROVAL James B. Enochs
JAMES B. ENOCHS DIRECTOR

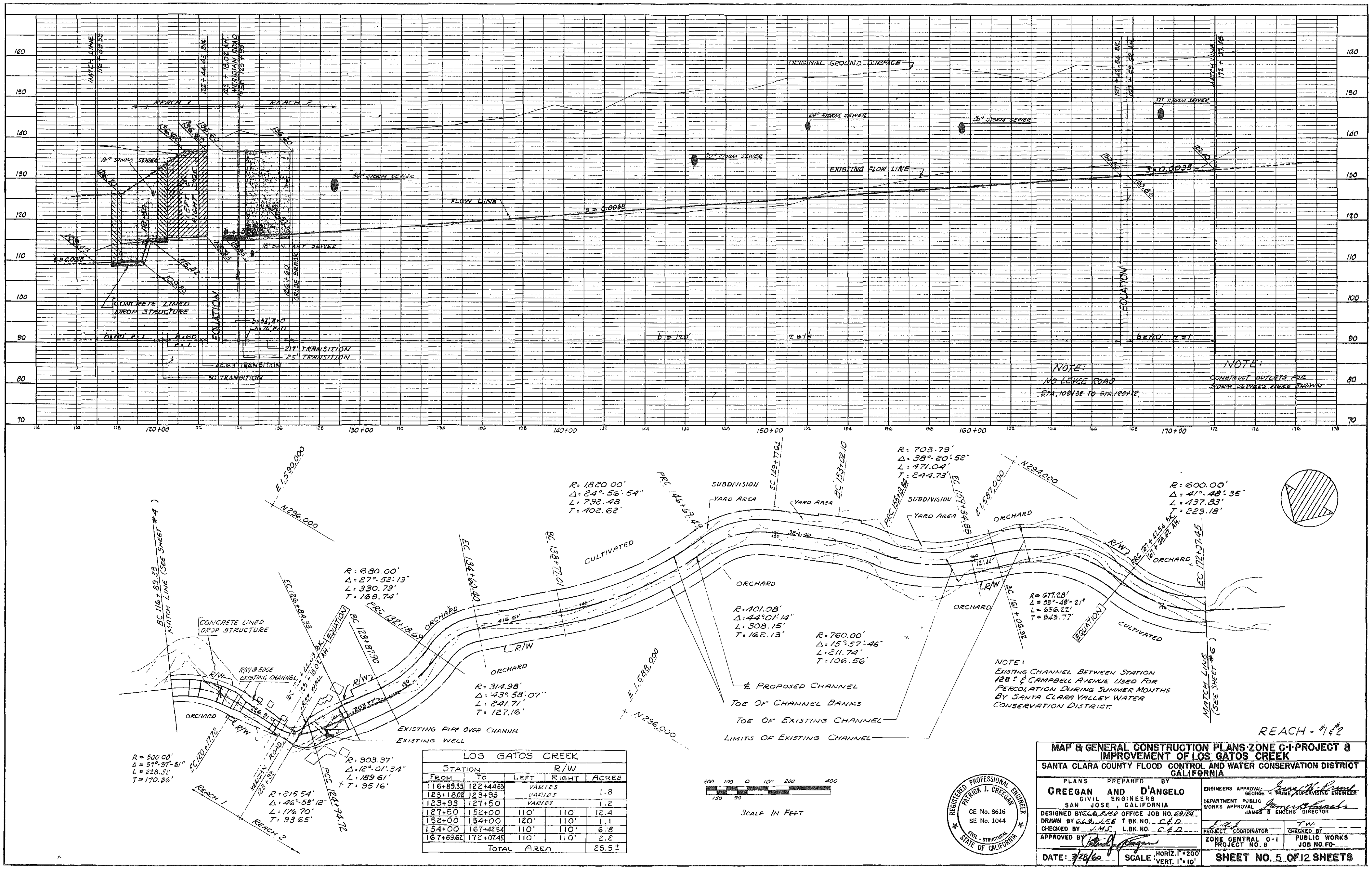
PROJECT COORDINATOR
D.S. - T.W.
CHECKED BY

ZONE CENTRAL C-1
PROJECT NO. 8

PUBLIC WORKS
JOB NO. FC-___

DATE: 3/23/60
SCALE HORIZ. 1" = 200' VERT. 1" = 10'
SHEET NO. 4 OF 12 SHEETS

PLATE NO. 20



NOTE:
EXISTING CHANNEL BETWEEN STATION 128± & CAMPBELL AVENUE USED FOR PERCOLATION DURING SUMMER MONTHS BY SANTA CLARA VALLEY WATER CONSERVATION DISTRICT.

REACH - #1 & #2

LOS GATOS CREEK				
STATION		R/W		
FROM	TO	LEFT	RIGHT	ACRES
116+89.33	122+44.63	VARIES		1.8
123+18.02	123+93	VARIES		
123+93	127+50	VARIES		1.2
127+50	152+00	110'	110'	12.4
152+00	154+00	120'	110'	1.1
154+00	167+42.54	110'	110'	6.8
167+69.62	172+07.45	110'	110'	2.2
TOTAL AREA				25.5±

PATRICK J. CREEGAN
CE No. 8616
SE No. 1044

MAP & GENERAL CONSTRUCTION PLANS·ZONE C-1·PROJECT 8
IMPROVEMENT OF LOS GATOS CREEK

SANTA CLARA COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT
CALIFORNIA

PLANS PREPARED BY
CREEGAN AND D'ANGELO
CIVIL ENGINEERS
SAN JOSE, CALIFORNIA

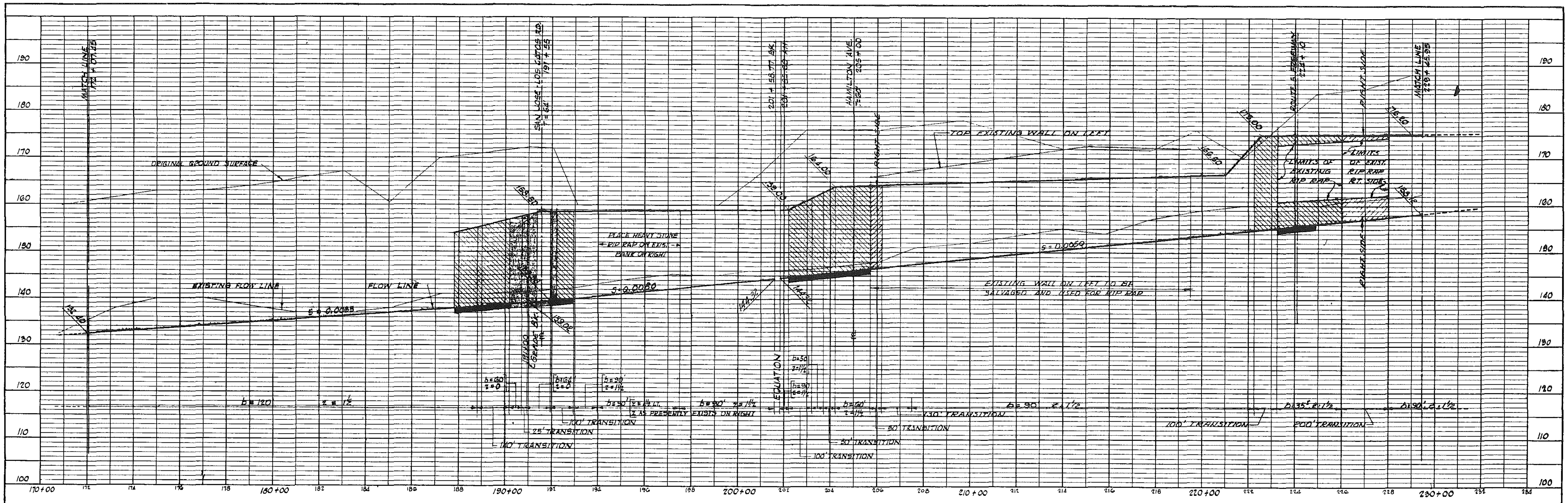
ENGINEERS APPROVAL: George H. Prime
GEORGE H PRIME, SUPERVISING ENGINEER
DEPARTMENT PUBLIC WORKS APPROVAL: James B. Enochs
JAMES B ENOCHS DIRECTOR

DESIGNED BY C.L.B., R.M.D. OFFICE JOB NO. 59/24
DRAWN BY C.L.B., J.E.S. T BK.NO. C & D
CHECKED BY J.M.S. L.BK.NO. C & D
APPROVED BY Patrick J. Creegan

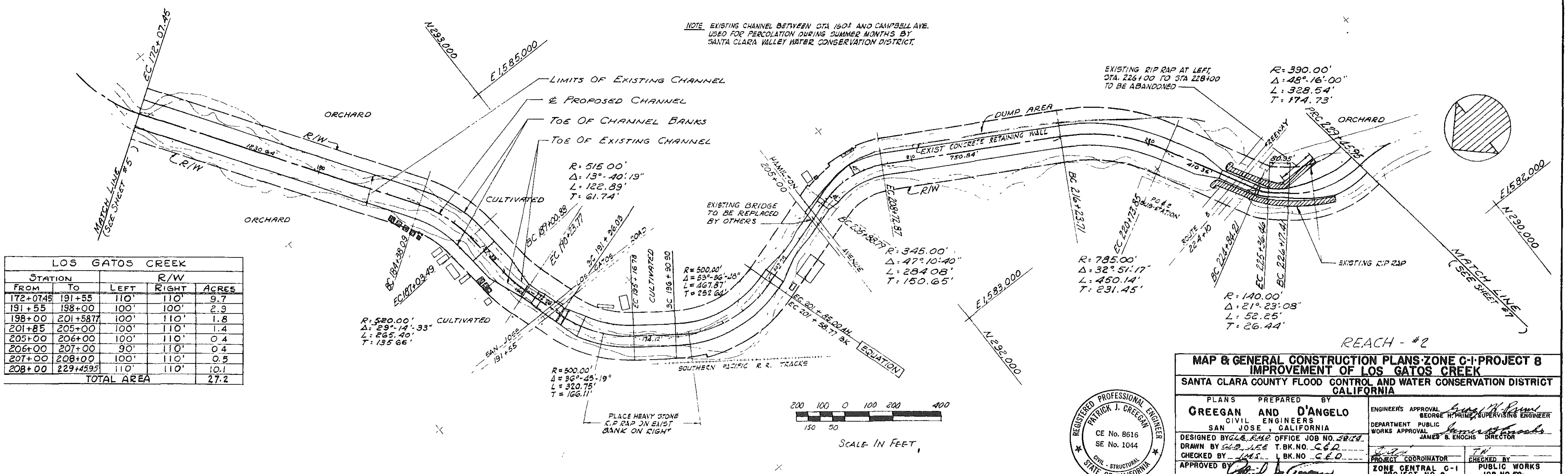
E.A.J. PROJECT COORDINATOR
T.W. CHECKED BY
ZONE CENTRAL C-1 PROJECT NO. 8
PUBLIC WORKS JOB NO. FO-

DATE: 3/28/60
SCALE: HORIZ. 1" = 200' VERT. 1" = 10'
SHEET NO. 5 OF 12 SHEETS

PLATE NO. 21



NOTE EXISTING CHANNEL BETWEEN STA 160± AND CAMPBELL AVE. USED FOR PERCOLATION DURING SUMMER MONTHS BY SANTA CLARA VALLEY WATER CONSERVATION DISTRICT.



LOS GATOS CREEK				
STATION		R/W		
FROM	TO	LEFT	RIGHT	ACRES
172+07.45	191+55	110'	110'	9.7
191+55	198+00	100'	100'	2.9
198+00	201+5877	100'	110'	1.8
201+85	205+00	100'	110'	1.4
205+00	206+00	100'	110'	0.4
206+00	207+00	90'	110'	0.4
207+00	208+00	100'	110'	0.5
208+00	229+45.95	110'	110'	10.1
TOTAL AREA				27.2

REACH - #2

MAP & GENERAL CONSTRUCTION PLANS·ZONE C-1·PROJECT 8 IMPROVEMENT OF LOS GATOS CREEK

SANTA CLARA COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT
CALIFORNIA

PLANS PREPARED BY
CREEGAN AND D'ANGELO
CIVIL ENGINEERS
SAN JOSE, CALIFORNIA

PATRICK J. CREEGAN
CE No. 8616
SE No. 1044

DESIGNED BY G.L.B., R.M.D. OFFICE JOB NO. 5824
DRAWN BY G.L.B., J.F.E. T.BK.NO. C.E.D.
CHECKED BY J.M.S. L.BK.NO C.E.D.
APPROVED BY Patrick J. Creegan

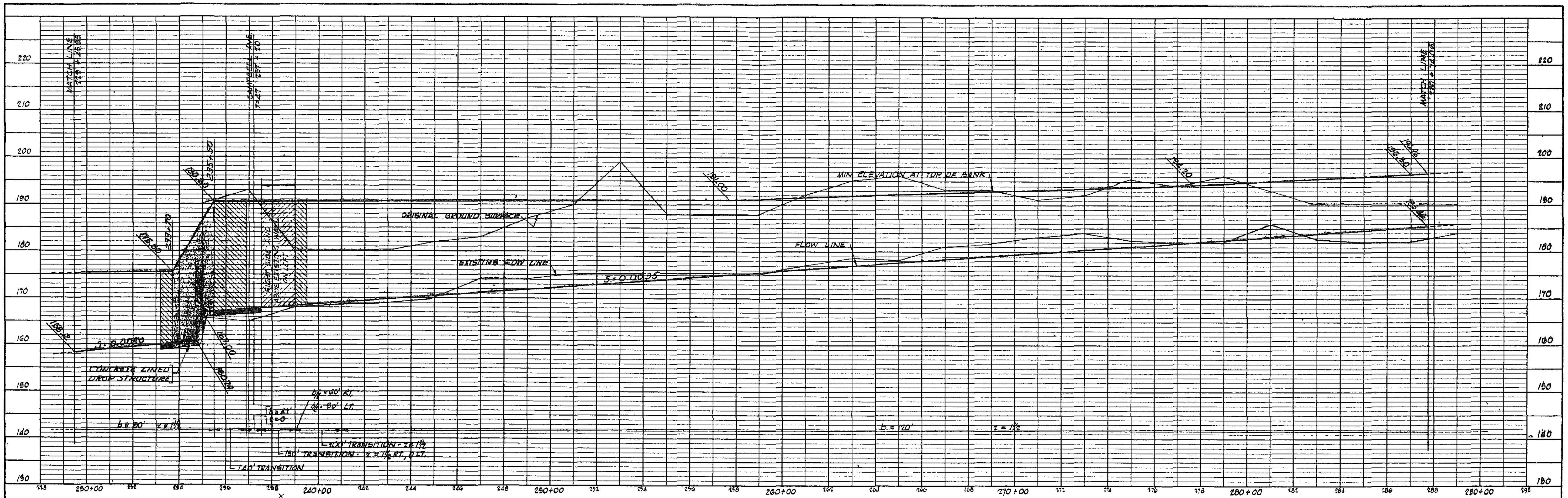
ENGINEER'S APPROVAL George H. Prime
GEORGE H. PRIME, SUPERVISING ENGINEER
DEPARTMENT PUBLIC WORKS APPROVAL James B. Enochs
JAMES B. ENOCHS DIRECTOR

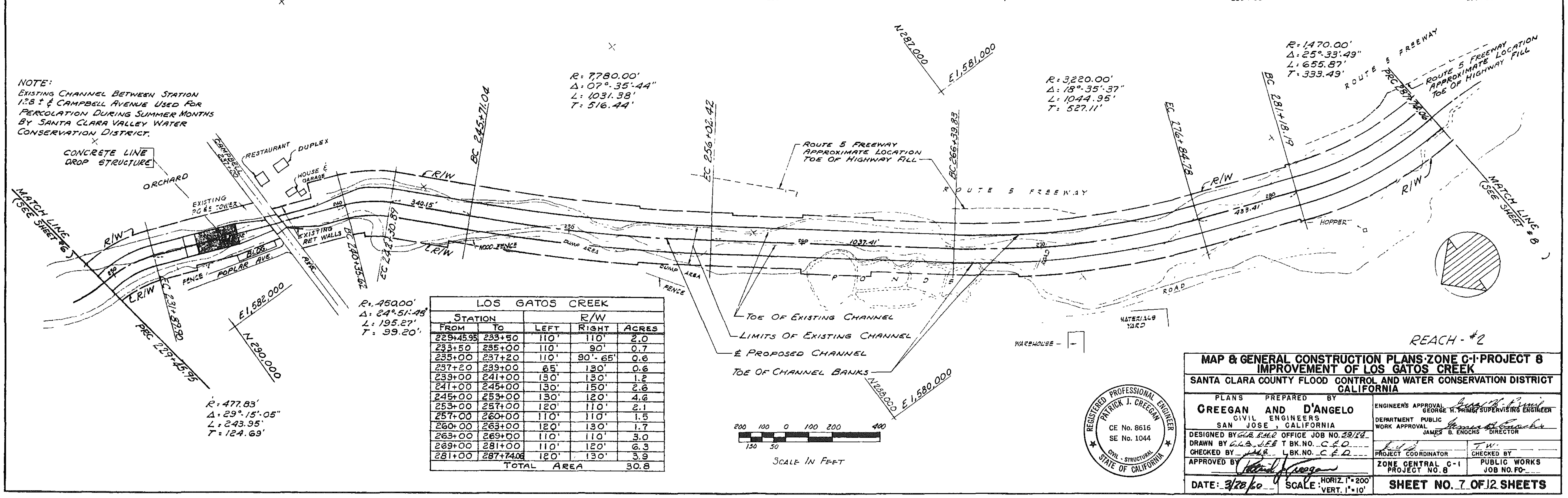
PROJECT COORDINATOR
TW
CHECKED BY

ZONE CENTRAL C-1 PROJECT NO. 8
PUBLIC WORKS JOB NO. FC-

DATE: 3/28/60
SCALE: HORIZ. 1" = 200' VERT. 1" = 10'
SHEET NO. 6 OF 12 SHEETS

PLATE NO. 22





NOTE:
EXISTING CHANNEL BETWEEN STATION 128 ± & CAMPBELL AVENUE USED FOR PERCOLATION DURING SUMMER MONTHS BY SANTA CLARA VALLEY WATER CONSERVATION DISTRICT.

LOS GATOS CREEK				
STATION		R/W		
FROM	TO	LEFT	RIGHT	ACRES
229+45.95	233+50	110'	110'	2.0
233+50	235+00	110'	90'	0.7
235+00	237+20	110'	90'-65'	0.6
237+20	239+00	65'	130'	0.6
239+00	241+00	130'	130'	1.2
241+00	245+00	130'	150'	2.6
245+00	253+00	130'	120'	4.6
253+00	257+00	120'	110'	2.1
257+00	260+00	110'	110'	1.5
260+00	263+00	120'	130'	1.7
263+00	269+00	110'	110'	3.0
269+00	281+00	110'	120'	6.3
281+00	287+74.06	120'	130'	3.9
TOTAL AREA				30.8

REACH - #2

PATRICK J. CREEGAN
CE No. 8616
SE No. 1044

MAP & GENERAL CONSTRUCTION PLANS·ZONE C-1·PROJECT 8
IMPROVEMENT OF LOS GATOS CREEK

SANTA CLARA COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT
CALIFORNIA

PLANS PREPARED BY
CREEGAN AND D'ANGELO
CIVIL ENGINEERS
SAN JOSE, CALIFORNIA

DESIGNED BY G.L.B. R.M.D.	OFFICE JOB NO. 59124
DRAWN BY G.L.B. J.F.E.	T BK. NO. C.E.D.
CHECKED BY J.M.G.	L BK. NO. C.E.D.

APPROVED BY Patrick J. Creegan

ENGINEER'S APPROVAL George H. Prime
GEORGE H. PRIME, SUPERVISING ENGINEER

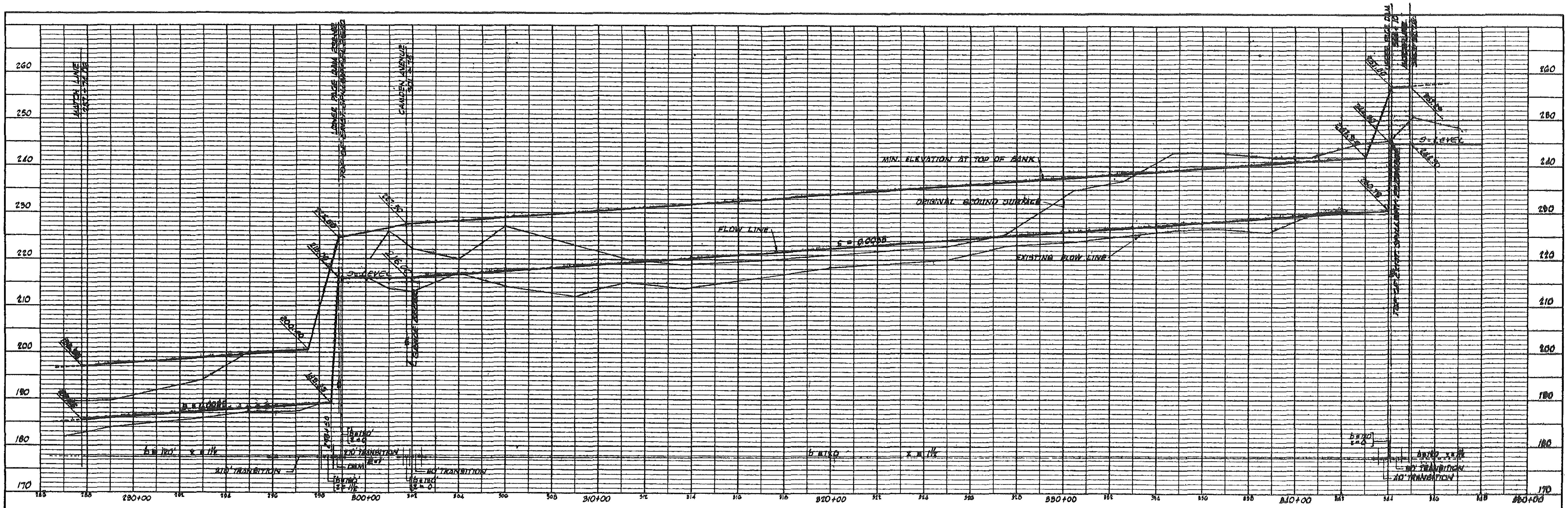
DEPARTMENT PUBLIC WORK APPROVAL James B. Enochs
JAMES B. ENOCHS DIRECTOR

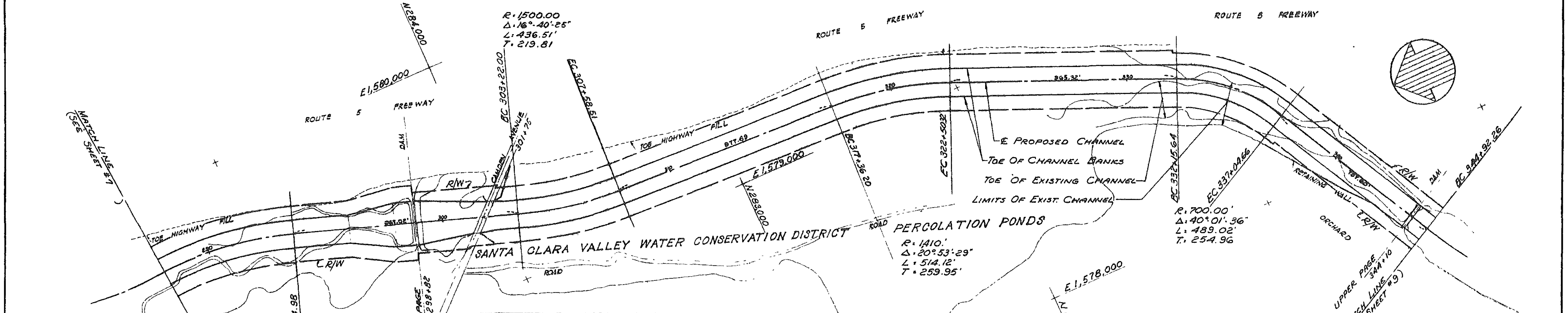
PROJECT COORDINATOR	T.W. CHECKED BY
ZONE CENTRAL C-1 PROJECT NO. 8	PUBLIC WORKS JOB NO. FC-

DATE: 3/28/60
SCALE: HORIZ. 1" = 200' VERT. 1" = 10'

SHEET NO. 7 OF 12 SHEETS

PLATE NO. 23





LOS GATOS CREEK				
STATION		R/W		
FROM	TO	LEFT	RIGHT	ACRES
287+74.06	296+00	120	120	4.6
296+00	298+00	120 - 160	120 - 160	1.3
298+00	299+00	160	160	0.7
299+00	301+75	130	130	1.5
301+75	332+00	120	120	16.6
332+00	337+50	110	120	2.9
337+50	344+92.26	110	110	1.9
TOTAL AREA				29.5

REACH #2

MAP & GENERAL CONSTRUCTION PLANS·ZONE C-1·PROJECT 8 IMPROVEMENT OF LOS GATOS CREEK

SANTA CLARA COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT
CALIFORNIA

PLANS PREPARED BY
CREEGAN AND D'ANGELO
CIVIL ENGINEERS
SAN JOSE, CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER
PATRICK J. CREEGAN
CE No. 8616
SE No. 1044
CIVIL - STRUCTURAL
STATE OF CALIFORNIA

DESIGNED BY G.L.B., R.M.D. OFFICE JOB NO. 59-128
DRAWN BY G.L.B. J.E.E. T.BK.NO. C.E.D.
CHECKED BY J.M.S. L.BK.NO. C.E.D.
APPROVED BY Patrick J. Creegan

ENGINEER'S APPROVAL George H. Prine
GEORGE H. PRINE, SUPERVISING ENGINEER
DEPARTMENT PUBLIC WORKS APPROVAL James B. Enochs
JAMES B ENOCHS DIRECTOR

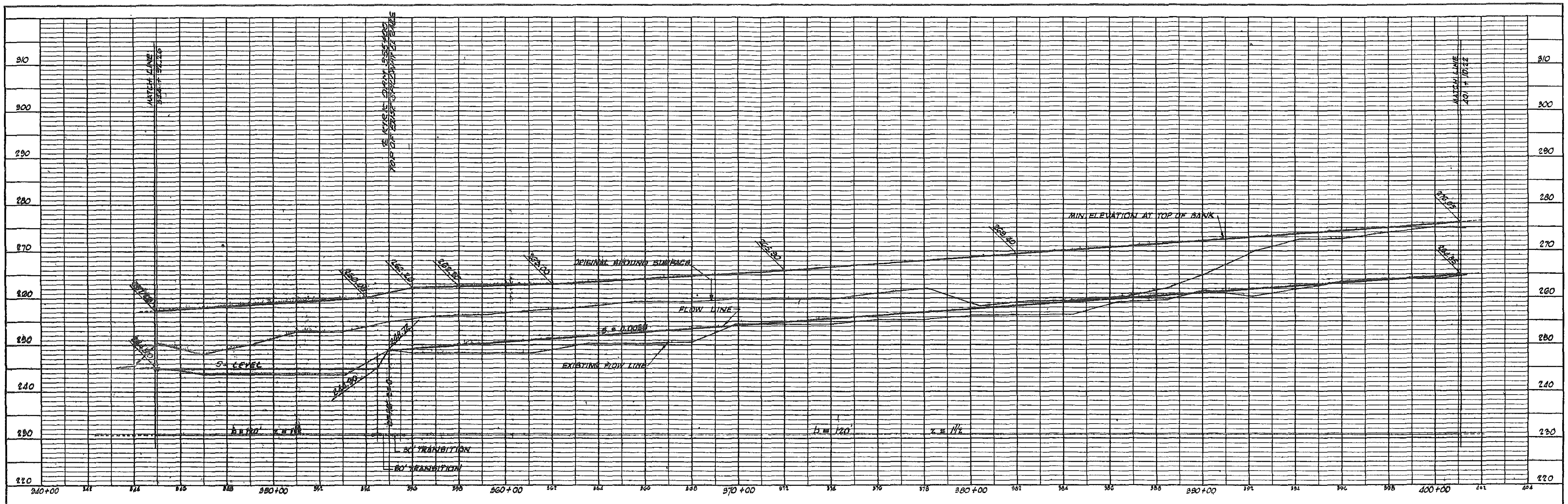
PROJECT COORDINATOR
CHECKED BY T.W.

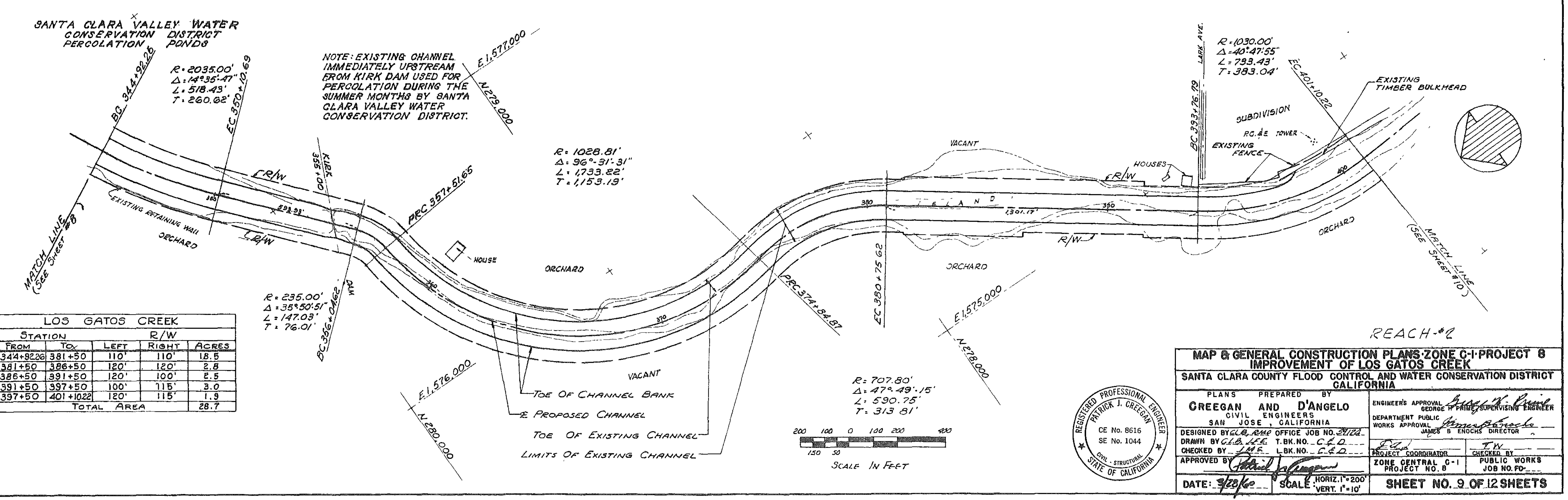
ZONE CENTRAL C-1 PROJECT NO.8
PUBLIC WORKS JOB NO. FD-

DATE: 3/28/60
SCALE: HORIZ. 1"=200' VERT. 1"=10'

SHEET NO. 8 OF 12 SHEETS

PLATE NO. 24





NOTE: EXISTING CHANNEL IMMEDIATELY UPSTREAM FROM KIRK DAM USED FOR PERCOLATION DURING THE SUMMER MONTHS BY SANTA CLARA VALLEY WATER CONSERVATION DISTRICT.

LOS GATOS CREEK				
STATION		R/W		
FROM	TO	LEFT	RIGHT	ACRES
344+92.26	381+50	110'	110'	18.5
381+50	386+50	120'	120'	2.8
386+50	391+50	120'	100'	2.5
391+50	397+50	100'	115'	3.0
397+50	401+1022	120'	115'	1.9
TOTAL AREA				28.7

REACH-#2

MAP & GENERAL CONSTRUCTION PLANS·ZONE C-1·PROJECT 8 IMPROVEMENT OF LOS GATOS CREEK

SANTA CLARA COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT
CALIFORNIA

PLANS PREPARED BY
CREEGAN AND D'ANGELO
CIVIL ENGINEERS
SAN JOSE, CALIFORNIA

PATRICK J. CREEGAN
CE No. 8616
SE No. 1044

DESIGNED BY G.L.B., R.M.C. OFFICE JOB NO. 59124
DRAWN BY G.L.B., J.F.E. T.BK.NO. C.E.D.
CHECKED BY J.M.E. L.BK.NO. C.E.D.
APPROVED BY Patrick J. Creegan

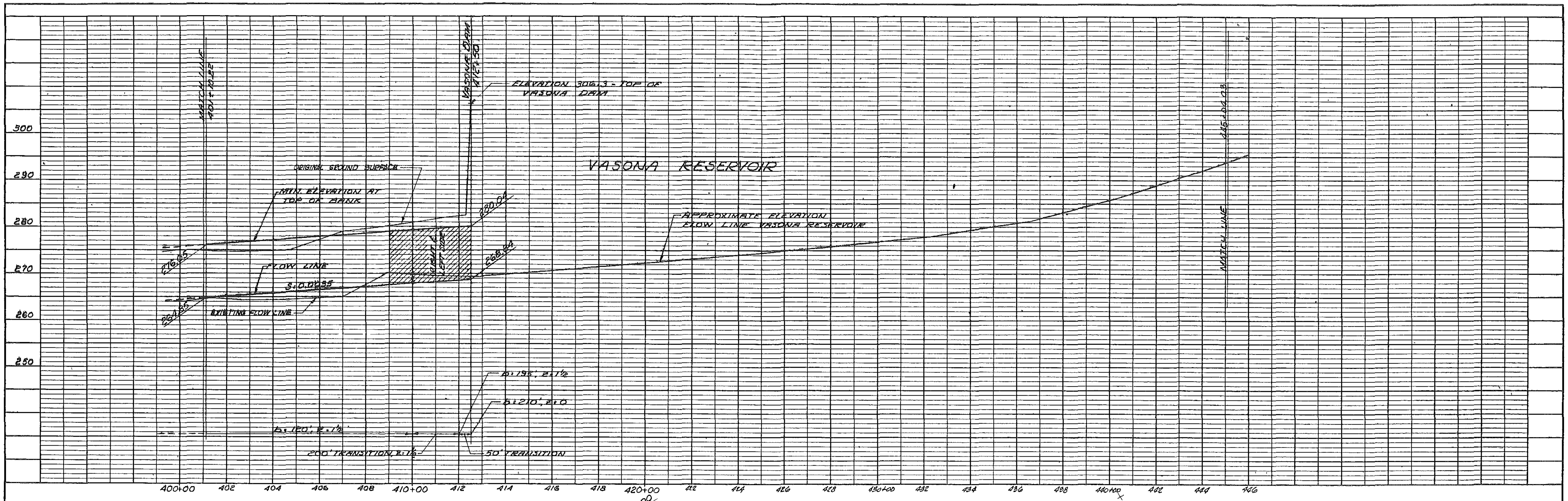
ENGINEER'S APPROVAL George W. Prime
GEORGE W. PRIME, SUPERVISING ENGINEER
DEPARTMENT PUBLIC WORKS APPROVAL James B. Enochs
JAMES B. ENOCHS DIRECTOR

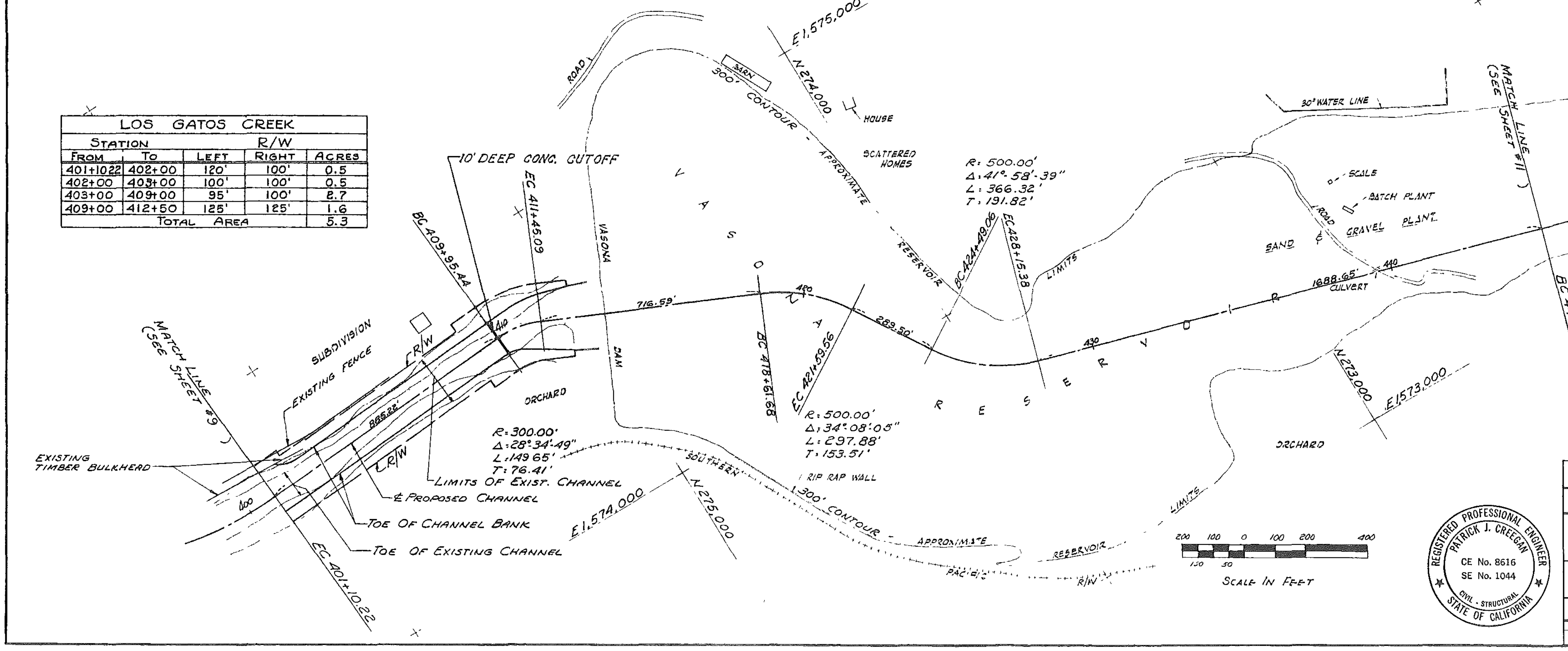
PROJECT COORDINATOR
T.W.
CHECKED BY

ZONE CENTRAL C-1 PROJECT NO. 8
PUBLIC WORKS JOB NO. FC-

DATE: 3/28/60
SCALE: HORIZ. 1" = 200' VERT. 1" = 10'
SHEET NO. 9 OF 12 SHEETS

PLATE NO. 25





LOS GATOS CREEK				
STATION		R/W		
FROM	TO	LEFT	RIGHT	ACRES
401+1022	402+00	120'	100'	0.5
402+00	403+00	100'	100'	0.5
403+00	409+00	95'	100'	2.7
409+00	412+50	125'	125'	1.6
TOTAL AREA				5.3

REACH-#2

PATRICK J. CREEGAN
CE No. 8616
SE No. 1044

MAP & GENERAL CONSTRUCTION PLANS·ZONE C-1·PROJECT 8
IMPROVEMENT OF LOS GATOS CREEK

SANTA CLARA COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT
CALIFORNIA

PLANS PREPARED BY
CREEGAN AND D'ANGELO
CIVIL ENGINEERS
SAN JOSE, CALIFORNIA

ENGINEER'S APPROVAL George H. Prime
GEORGE H PRIME SUPERVISING ENGINEER

DEPARTMENT PUBLIC WORKS APPROVAL James B. Enochs
JAMES B ENOCHS DIRECTOR

DESIGNED BY G.L.B., R.M.D. OFFICE JOB NO. 57124
DRAWN BY G.L.B., J.F.E. T.BK.NO. C&D
CHECKED BY J.M.S. L.BK.NO. C&D

PROJECT COORDINATOR Bdd
CHECKED BY T.W.

APPROVED BY Patrick J. Creegan

ZONE CENTRAL C-1 PROJECT NO. 8

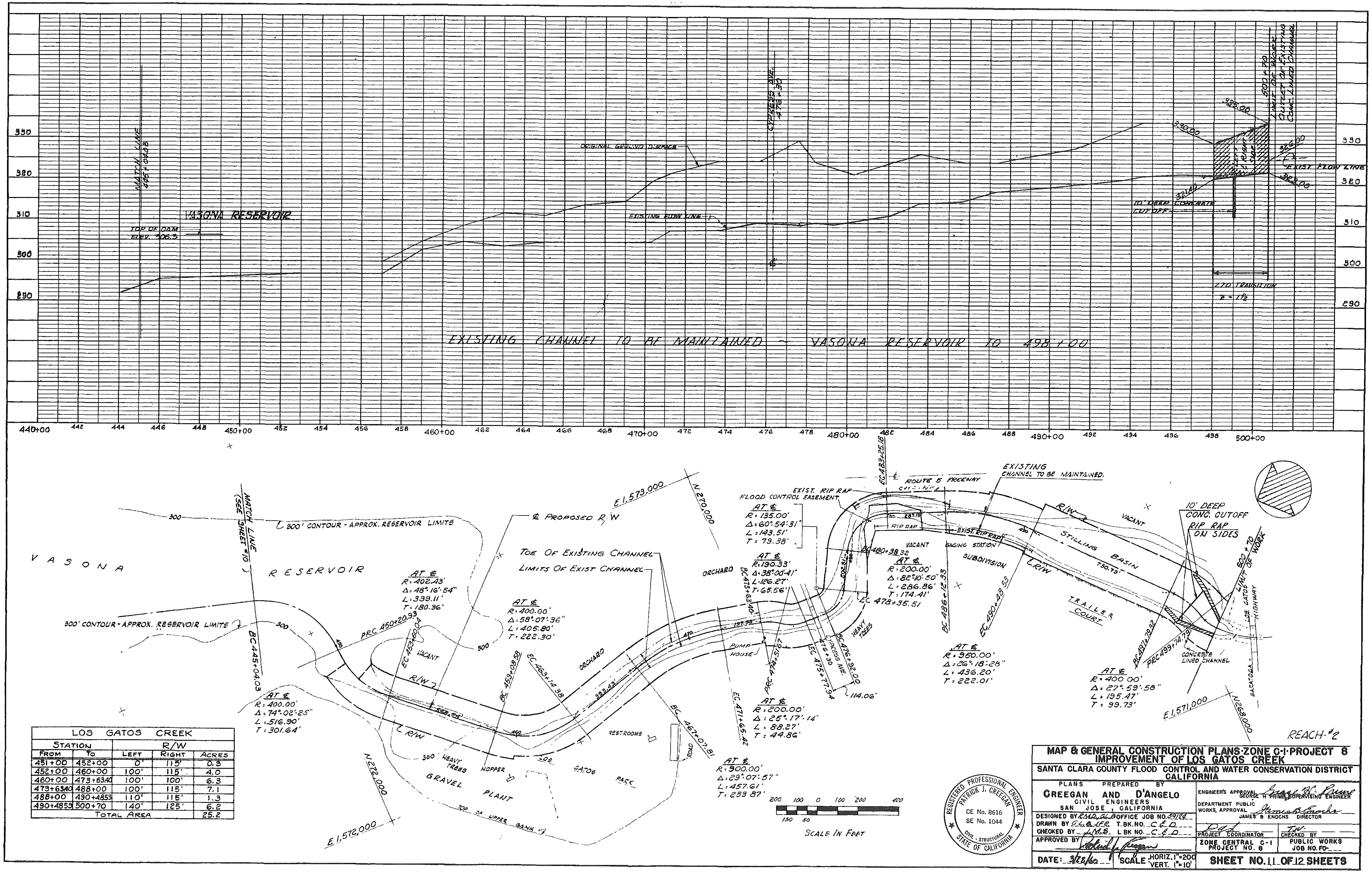
PUBLIC WORKS JOB NO. FO-

DATE: 3/28/60

SCALE: HORIZ. 1"=200' VERT. 1"=10'

SHEET NO. 10 OF 12 SHEETS

PLATE NO. 26



LOS GATOS CREEK				
STATION		R/W		
FROM	TO	LEFT	RIGHT	ACRES
451+00	452+00	0'	115'	0.3
452+00	460+00	100'	115'	4.0
460+00	473+6340	100'	100'	6.3
473+6340	488+00	100'	115'	7.1
488+00	490+4853	110'	115'	1.3
490+4853	500+70	140'	125'	6.2
TOTAL AREA				25.2

REACH-#2

REGISTERED PROFESSIONAL ENGINEER
PATRICK J. CREEGAN
CE No. 8616
SE No. 1044
CIVIL - STRUCTURAL
STATE OF CALIFORNIA

MAP & GENERAL CONSTRUCTION PLANS·ZONE C-1·PROJECT 8
IMPROVEMENT OF LOS GATOS CREEK

SANTA CLARA COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT
CALIFORNIA

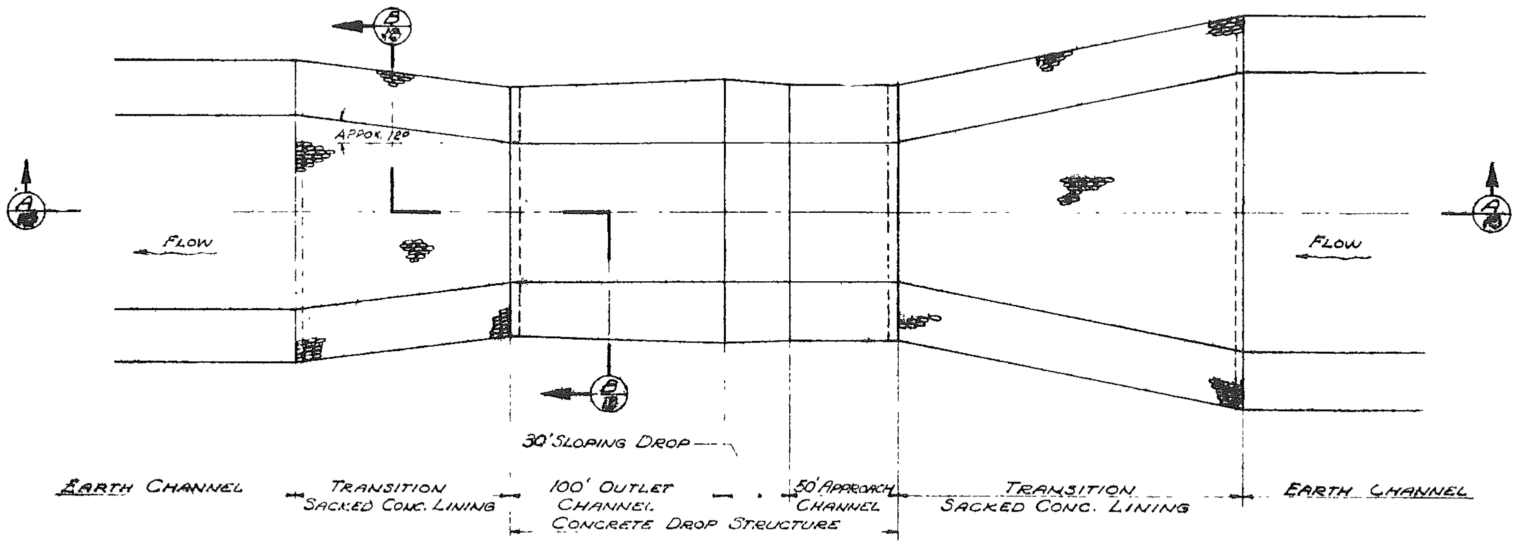
PLANS PREPARED BY
CREEGAN AND D'ANGELO
CIVIL ENGINEERS
SAN JOSE, CALIFORNIA

DESIGNED BY R.M.D., G.L.B. OFFICE JOB NO. 59129
DRAWN BY G.L.B., J.F.E. T.BK.NO. C.F.D.
CHECKED BY J.M.S. L BK NO. C.F.D.
APPROVED BY Patrick J. Creegan

ENGINEER'S APPROVAL George H. Prime
GEORGE H PRIME SUPERVISING ENGINEER
DEPARTMENT PUBLIC WORKS, APPROVAL James B. Enochs
JAMES B ENOCHS DIRECTOR
PROJECT COORDINATOR
T.W.
CHECKED BY
ZONE CENTRAL C-1 PROJECT NO. 8
PUBLIC WORKS JOB NO. FC-

DATE: 3/28/60
SCALE: HORIZ. 1"=200' VERT. 1"=10'
SHEET NO. 11 OF 12 SHEETS

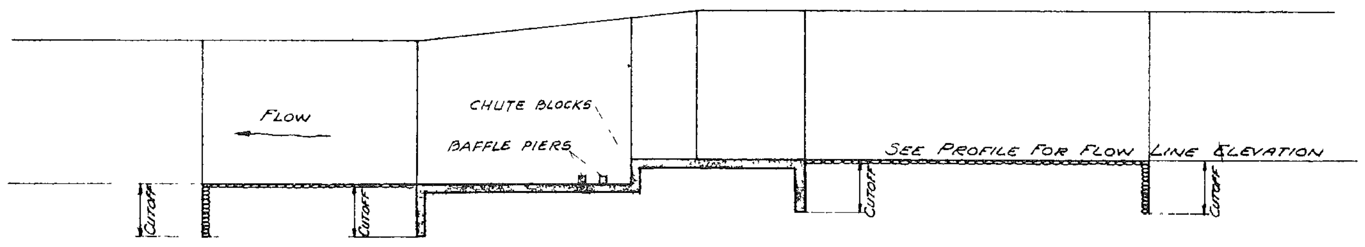
PLATE NO. 27



PLAN

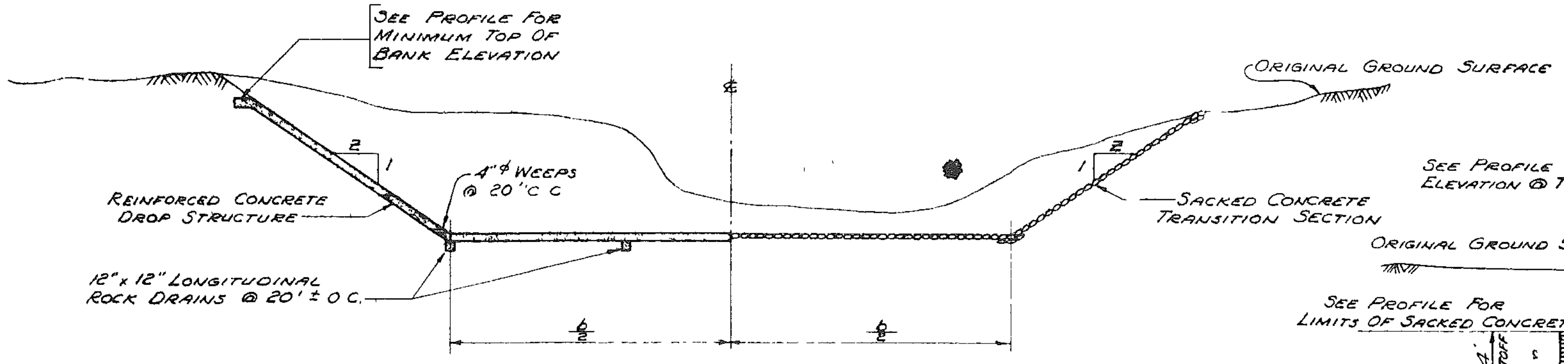
SCALE. 1" = 40'

NOTE:
FOR 'B' AND 'Z' DIMENSIONS SEE PROFILE SHEETS.



LONGITUDINAL SECTION A/12

SCALE: HORZ. 1" = 40'
VERT. 1" = 10'

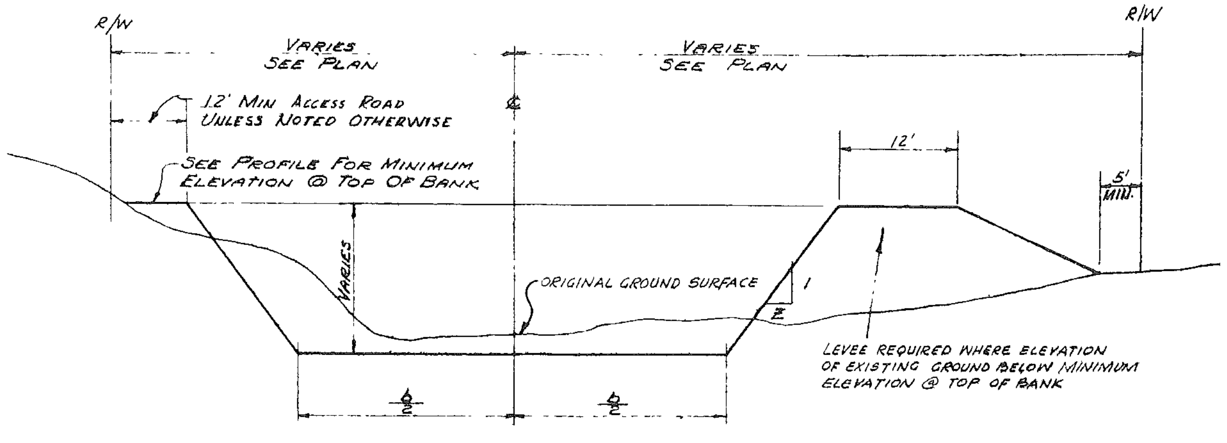

SEE PROFILE FOR MINIMUM TOP OF BANK ELEVATION
ORIGINAL GROUND SURFACE
2
1
1
2
4"ϕ WEEPS @ 20' C.C.
REINFORCED CONCRETE DROP STRUCTURE
SACKED CONCRETE TRANSITION SECTION
12" x 12" LONGITUDINAL ROCK DRAINS @ 20' ± O.C.
b/2
b/2

SECTION B/12

SCALE: 1" = 10'

TYPICAL DROP STRUCTURE

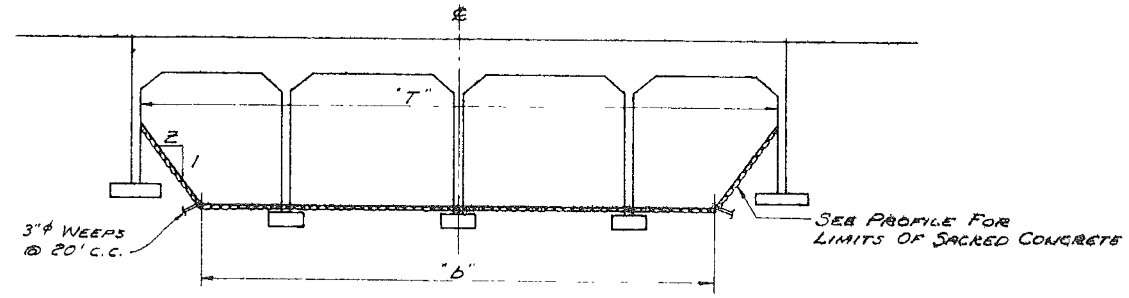
(SEE PROFILE FOR DIMENSIONS)


R/W
R/W
VARIES SEE PLAN
VARIES SEE PLAN
12' MIN ACCESS ROAD UNLESS NOTED OTHERWISE
SEE PROFILE FOR MINIMUM ELEVATION @ TOP OF BANK
12'
5'
VARIES
ORIGINAL GROUND SURFACE
1
Z
LEVEE REQUIRED WHERE ELEVATION OF EXISTING GROUND BELOW MINIMUM ELEVATION @ TOP OF BANK
b/2
b/2

TYPICAL SECTION

RIVER CHANNEL

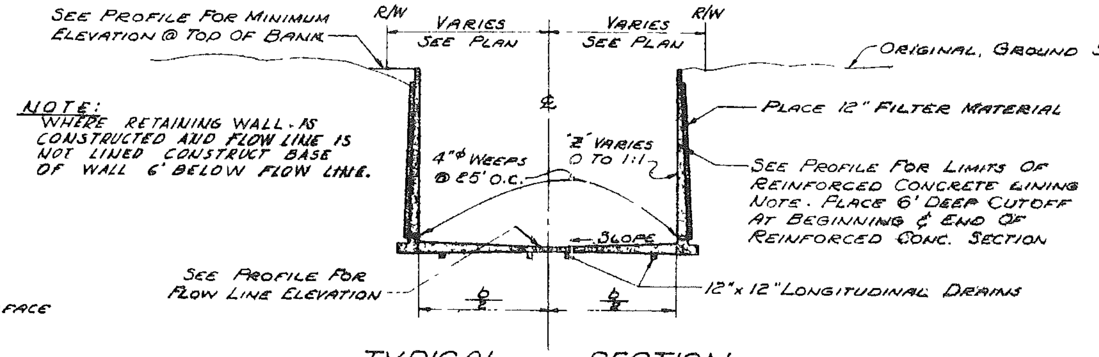
(NOT TO SCALE - SEE PROFILE FOR DIMS.)



TYPICAL SECTION

AT BRIDGE WITH SACKED CONCRETE

(NOT TO SCALE - SEE PROFILE FOR DIM'S.)


SEE PROFILE FOR MINIMUM ELEVATION @ TOP OF BANK
R/W
R/W
VARIES SEE PLAN
VARIES SEE PLAN
ORIGINAL GROUND SURFACE
PLACE 12" FILTER MATERIAL
4"ϕ WEEPS @ 25' O.C.
'Z' VARIES 0 TO 1:1
SEE PROFILE FOR LIMITS OF REINFORCED CONCRETE LINING
NOTE. PLACE 6' DEEP CUTOFF AT BEGINNING & END OF REINFORCED CONC. SECTION
SLOPE
SEE PROFILE FOR FLOW LINE ELEVATION
12" x 12" LONGITUDINAL DRAINS
b/2
b/2

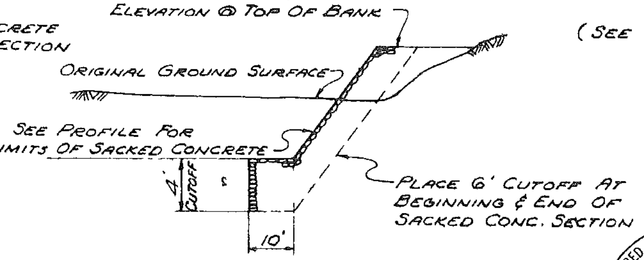
NOTE:
WHERE RETAINING WALL IS CONSTRUCTED AND FLOW LINE IS NOT LINED CONSTRUCT BASE OF WALL 6' BELOW FLOW LINE.

TYPICAL SECTION

CONCRETE LINED CHANNEL

SCALE: 1" = 20'

(SEE PROFILE FOR DIMENSIONS)


SEE PROFILE FOR MINIMUM ELEVATION @ TOP OF BANK
ORIGINAL GROUND SURFACE
SEE PROFILE FOR LIMITS OF SACKED CONCRETE
4' CUTOFF
10'
PLACE 6' CUTOFF AT BEGINNING & END OF SACKED CONC. SECTION

TYPICAL SECTION

WITH SACKED CONCRETE RIPRAP ON SIDE ONLY

NOT TO SCALE

MAP & GENERAL CONSTRUCTION PLANS · ZONE C-1 · PROJECT 8
IMPROVEMENT OF LOS GATOS CREEK
SANTA CLARA COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT
CALIFORNIA

PLANS PREPARED BY
CREEGAN AND D'ANGELO
CIVIL ENGINEERS
SAN JOSE, CALIFORNIA

PATRICK J. CREEGAN
CE No. 8616
SE No. 1044

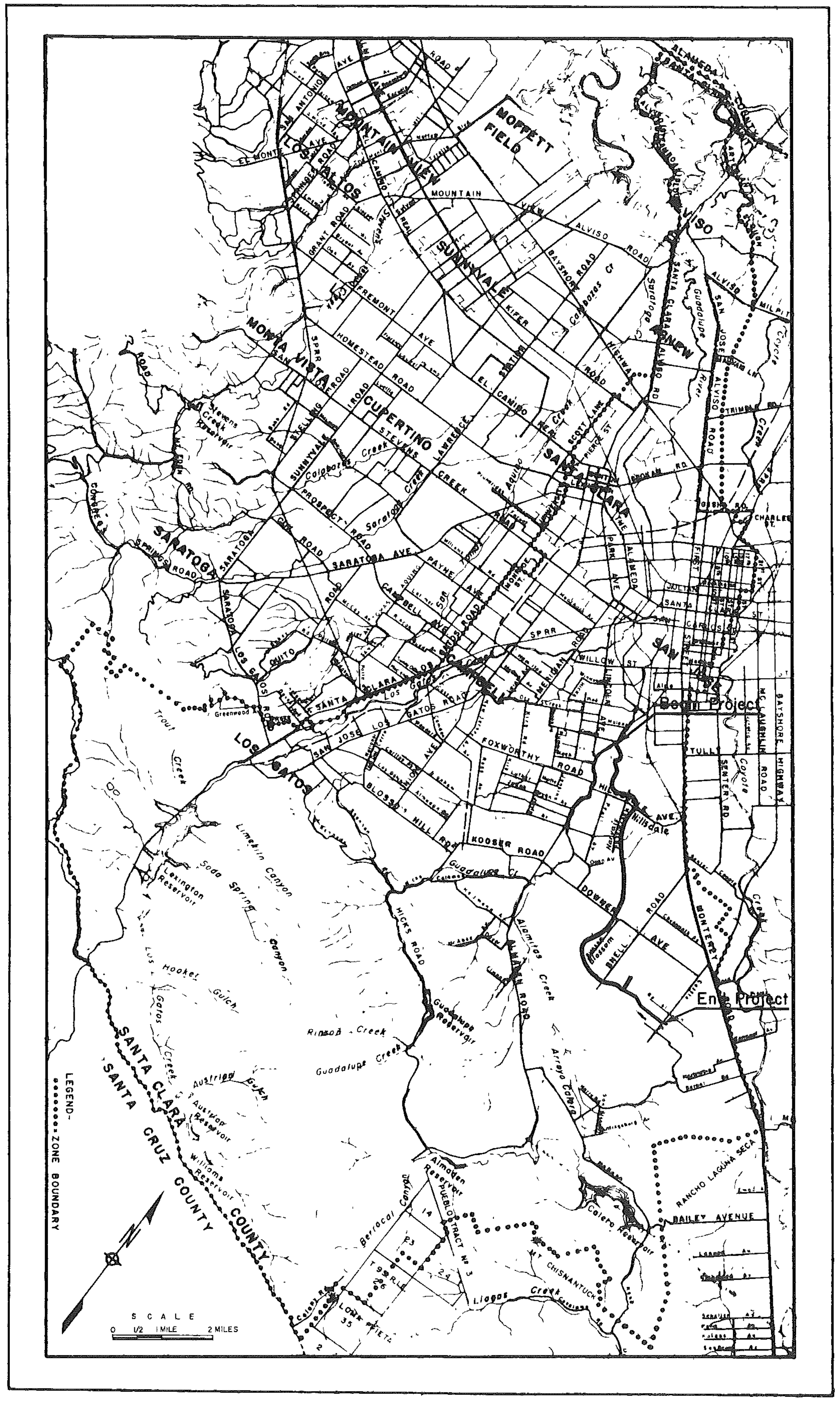
DESIGNED BY RDW RMD OFFICE JOB NO. ______
DRAWN BY J.F.F. T.BK.NO. ______
CHECKED BY J.M.G. L.BK.NO. ______
APPROVED BY Patrick J. Creegan
DATE: 3/20/60 SCALE: AS NOTED

ENGINEERS APPROVAL George H. Prime
GEORGE H. PRIME, SUPERVISING ENGINEER
DEPARTMENT PUBLIC WORKS APPROVAL James B. Enochs
JAMES B. ENOCHS DIRECTOR

PROJECT COORDINATOR
CHECKED BY TW-D
ZONE CENTRAL C-1 PROJECT NO. 8
PUBLIC WORKS JOB NO. PO-___

SHEET NO. 12 OF 12 SHEETS

PLATE NO. 28



MAP AND
GENERAL CONSTRUCTION PLANS

OF

ZONE C-I (CENTRAL) PROJECT NO.-7

CANOAS CREEK IMPROVEMENT

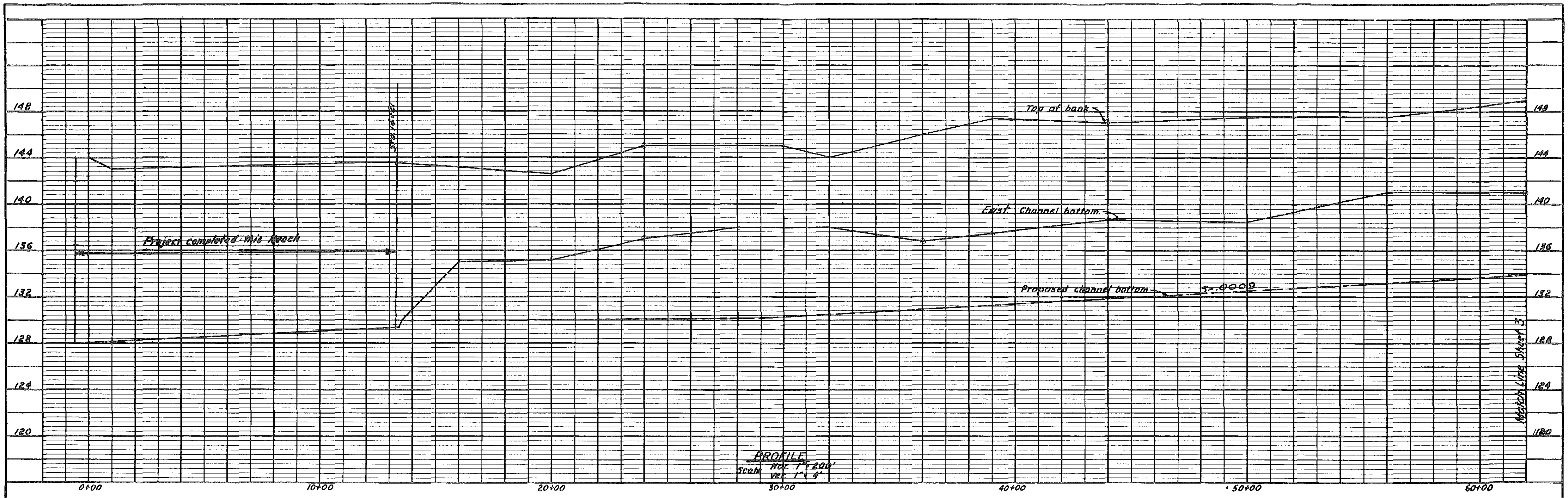
FROM ALMADEN ROAD TO COTTLE AVE.

SANTA CLARA COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT

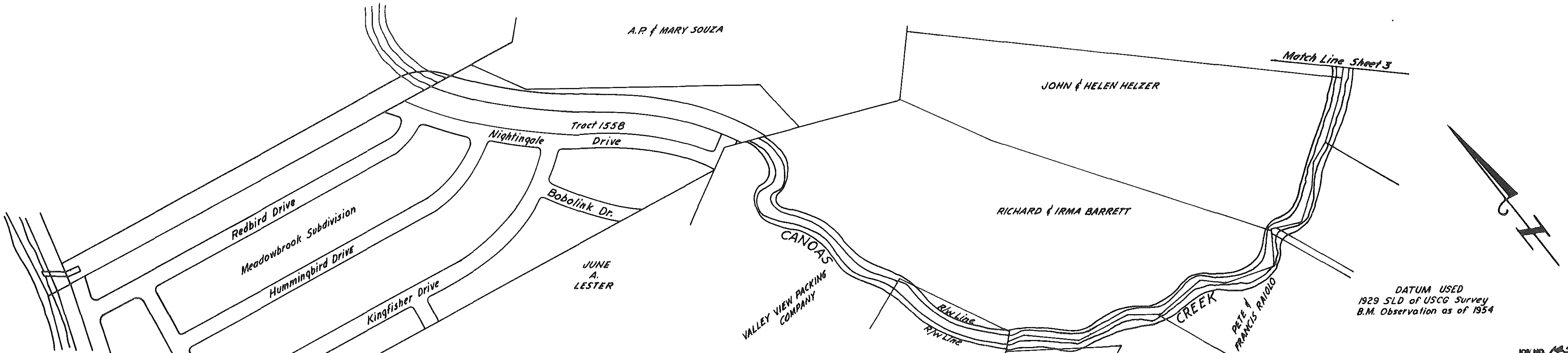
SANTA CLARA COUNTY, CALIFORNIA

200 100 0 100 200 400
150 50
SCALE IN FEET

PLATE 29

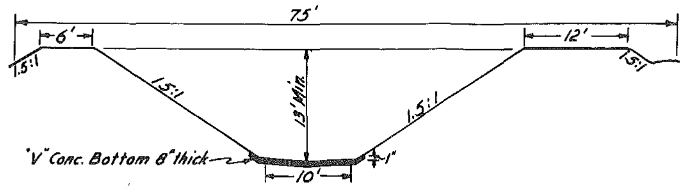


PROFILE
Scale Hor. 1" = 200'
Ver. 1" = 4'



DATUM USED
1929 SLD of USCG Survey
B.M. Observation as of 1954

PLAN
Scale: 1" = 200'



TYPICAL SECTION
From S. line of tract 1558 to Hillsdale Ave.
SCALE: 1" = 10'

REV. NO.	APPROVED	DATE	CHANGE

JOB NO. 1456

ZONE C-1 (CENTRAL) PROJECT 7
CANOAS CREEK IMPROVEMENT
MAP AND GENERAL CONSTRUCTION PLANS

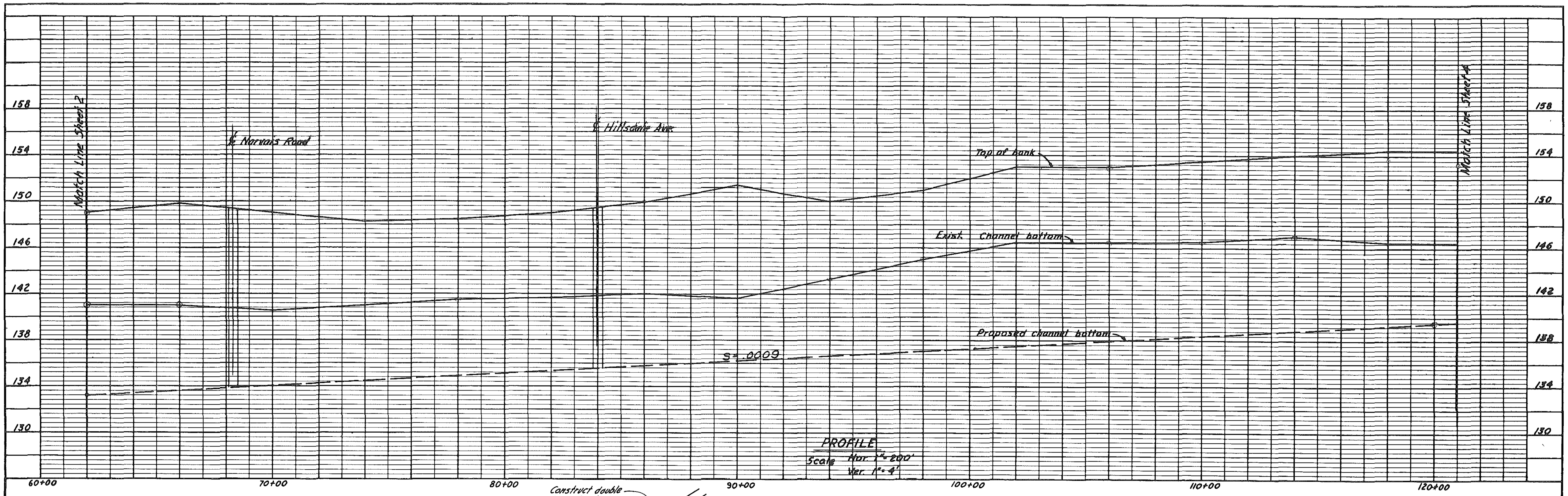
SANTA CLARA COUNTY FLOOD CONTROL
AND
WATER CONSERVATION DISTRICT

APPROVED FOR ENGINEERING
George H. Prune
GEORGE H. PRUNE, SUPERVISING ENGINEER
APPROVED FOR DEPT. OF PUBLIC WORKS
James B. Enochs
JAMES B. ENOCHS, DIRECTOR

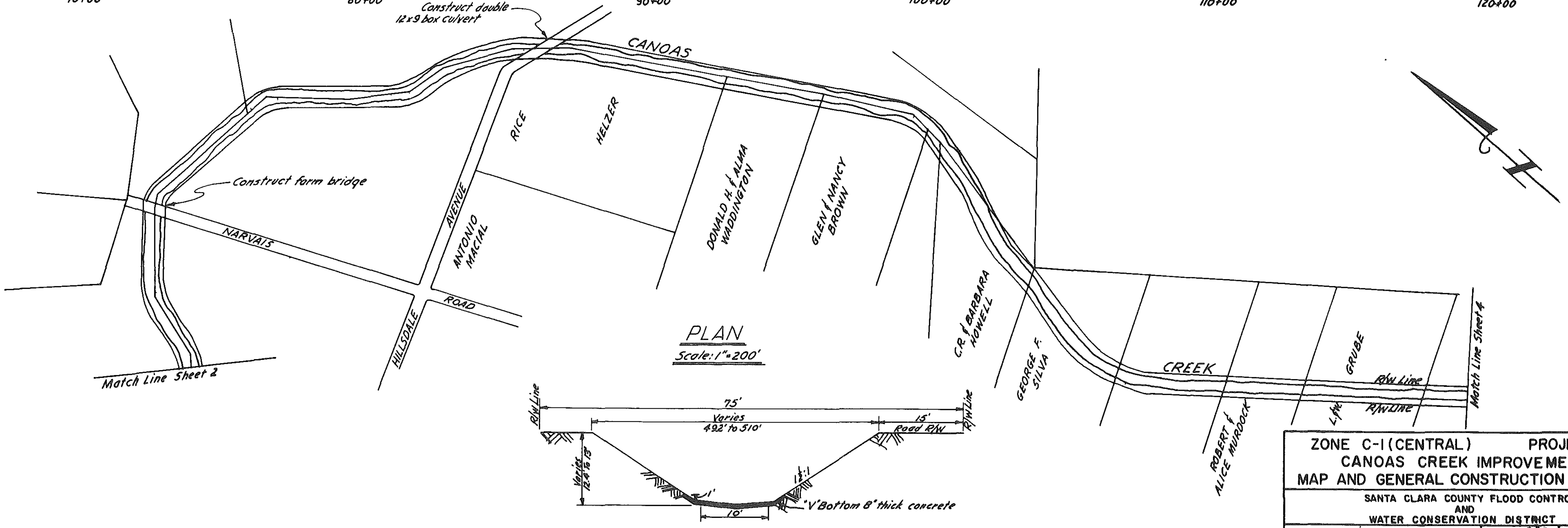
DESIGN R.B.B. C.B.
DRAWN R.H.F.
CHECKED C.B.
DATE 9-30-60

SCALE: AS SHOWN
T. B.
L. B.
SHEET 2 OF 9
FILE NO.

PLATE 30



PROFILE
Scale Hor. 1" = 200'
Ver. 1" = 4'



PLAN
Scale: 1" = 200'

TYPICAL SECTION
Between Hillsdale Avenue and S.P.R.R.
SCALE: N.S.

REV. NO	APPROVED	DATE	CHANGE

ZONE C-1 (CENTRAL) PROJECT 7
CANOAS CREEK IMPROVEMENT
MAP AND GENERAL CONSTRUCTION PLANS

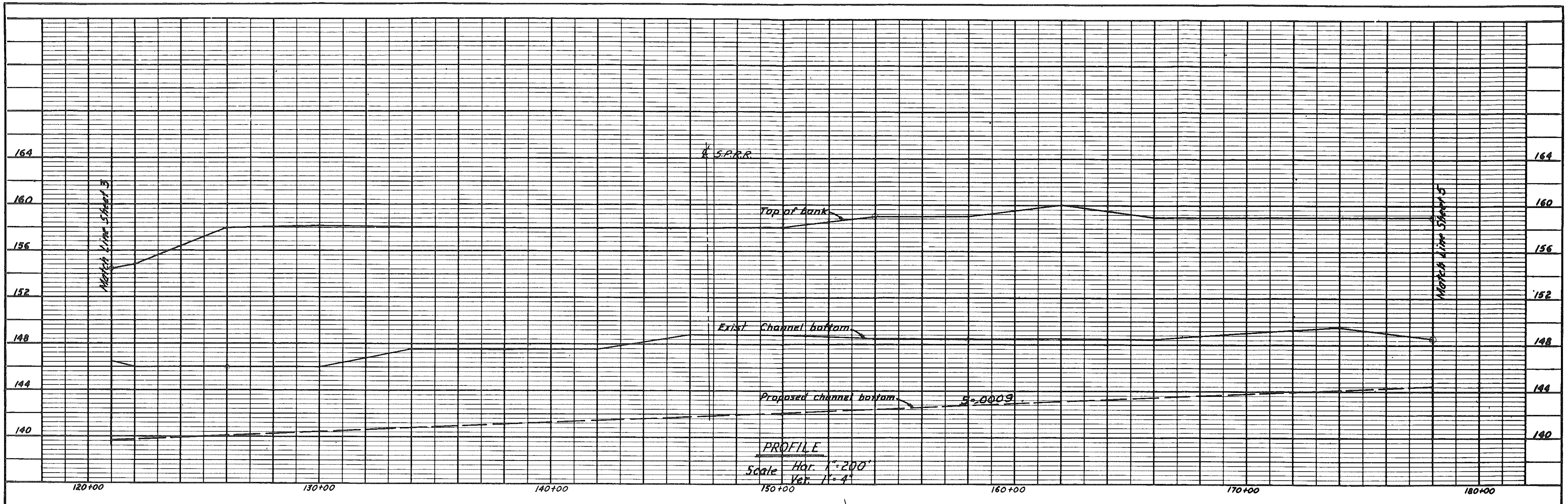
SANTA CLARA COUNTY FLOOD CONTROL
AND
WATER CONSERVATION DISTRICT

ENGINEERING APPROVAL
George H. Prime
GEORGE H. PRIME, SUPERVISING ENGINEER
APPROVED FOR DEPT. OF PUBLIC WORKS
James B. Enochs
JAMES B. ENOCHS, DIRECTOR

DESIGN R.E.E. C.B.
DRAWN R.J.F.
CHECKED C.B.
DATE
9-30-60

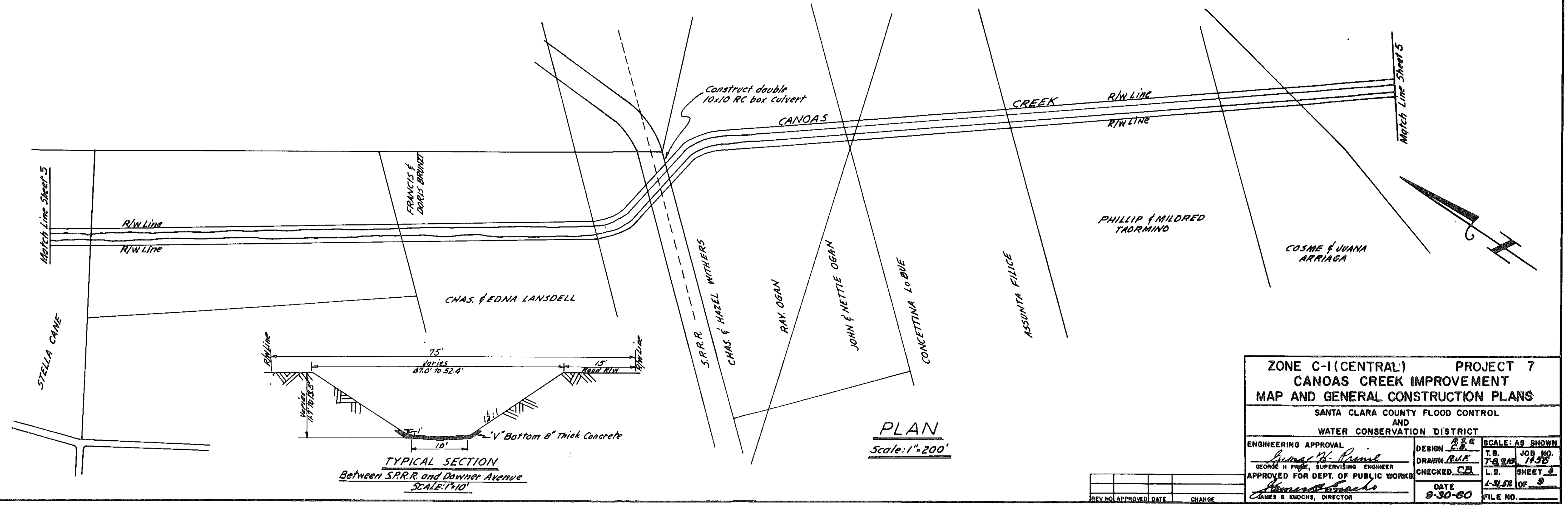
SCALE: AS SHOWN
T.B. 7-32/0
JOB NO. 1156
L.B. L-52.52
SHEET 3 OF 9
FILE NO.

PLATE 31



PROFILE

Scale Hor. 1"=200' Ver. 1"=4'



TYPICAL SECTION

Between S.P.R.R. and Downer Avenue

SCALE: 1"=10'

PLAN

Scale: 1"=200'

REV NO	APPROVED	DATE	CHANGE

ZONE C-1 (CENTRAL) PROJECT 7

CANOAS CREEK IMPROVEMENT

MAP AND GENERAL CONSTRUCTION PLANS

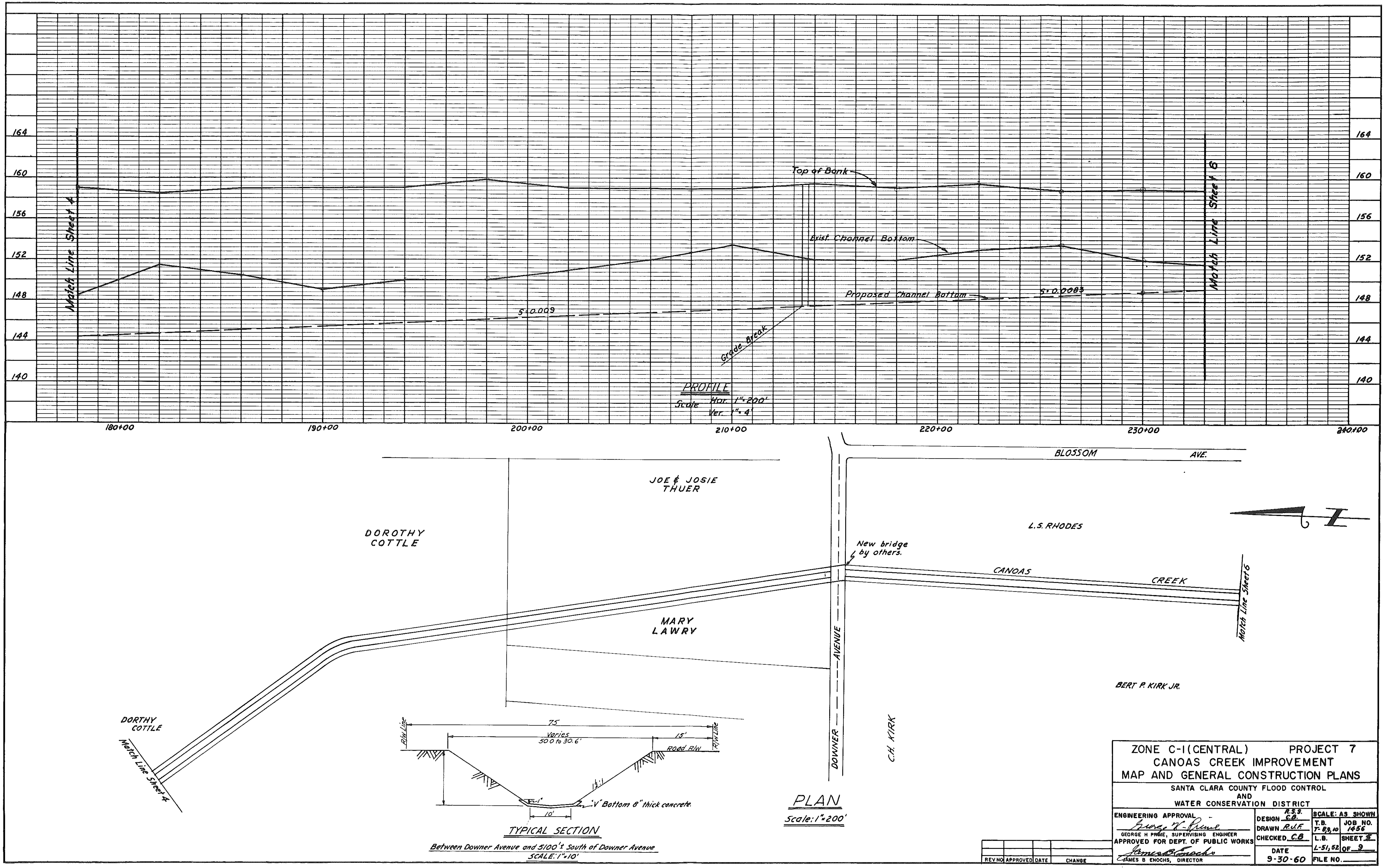
SANTA CLARA COUNTY FLOOD CONTROL
AND
WATER CONSERVATION DISTRICT

ENGINEERING APPROVAL
George H. Prime
GEORGE H PRIME, SUPERVISING ENGINEER
APPROVED FOR DEPT. OF PUBLIC WORKS
James B. Enochs
JAMES B. ENOCHS, DIRECTOR

DESIGN R.S.E. C.B.
DRAWN R.J.F.
CHECKED CB
DATE 9-30-60

SCALE: AS SHOWN
T.B. 7-8,9,10
JOB NO. 1958
L.B. L-54,52
SHEET 4 OF 9
FILE NO.

PLATE 32



ZONE C-1 (CENTRAL) PROJECT 7
CANOAS CREEK IMPROVEMENT
MAP AND GENERAL CONSTRUCTION PLANS

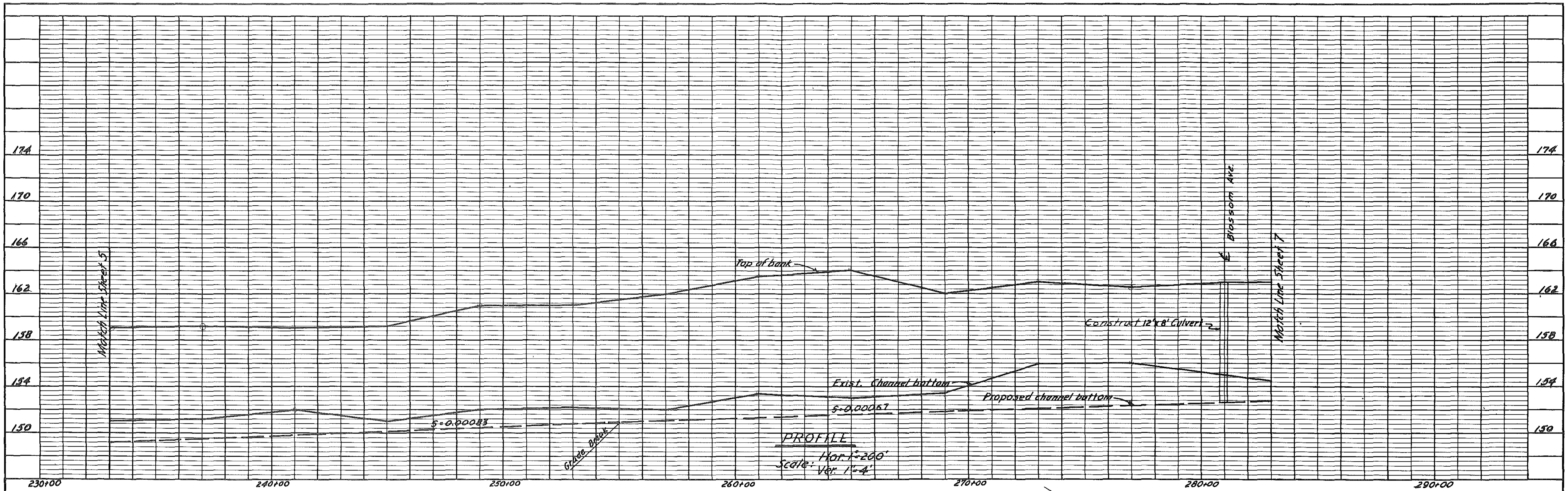
SANTA CLARA COUNTY FLOOD CONTROL
AND
WATER CONSERVATION DISTRICT

ENGINEERING APPROVAL
George H. Prime
GEORGE H PRIME, SUPERVISING ENGINEER
APPROVED FOR DEPT. OF PUBLIC WORKS
James B. Enochs
JAMES B ENOCHS, DIRECTOR

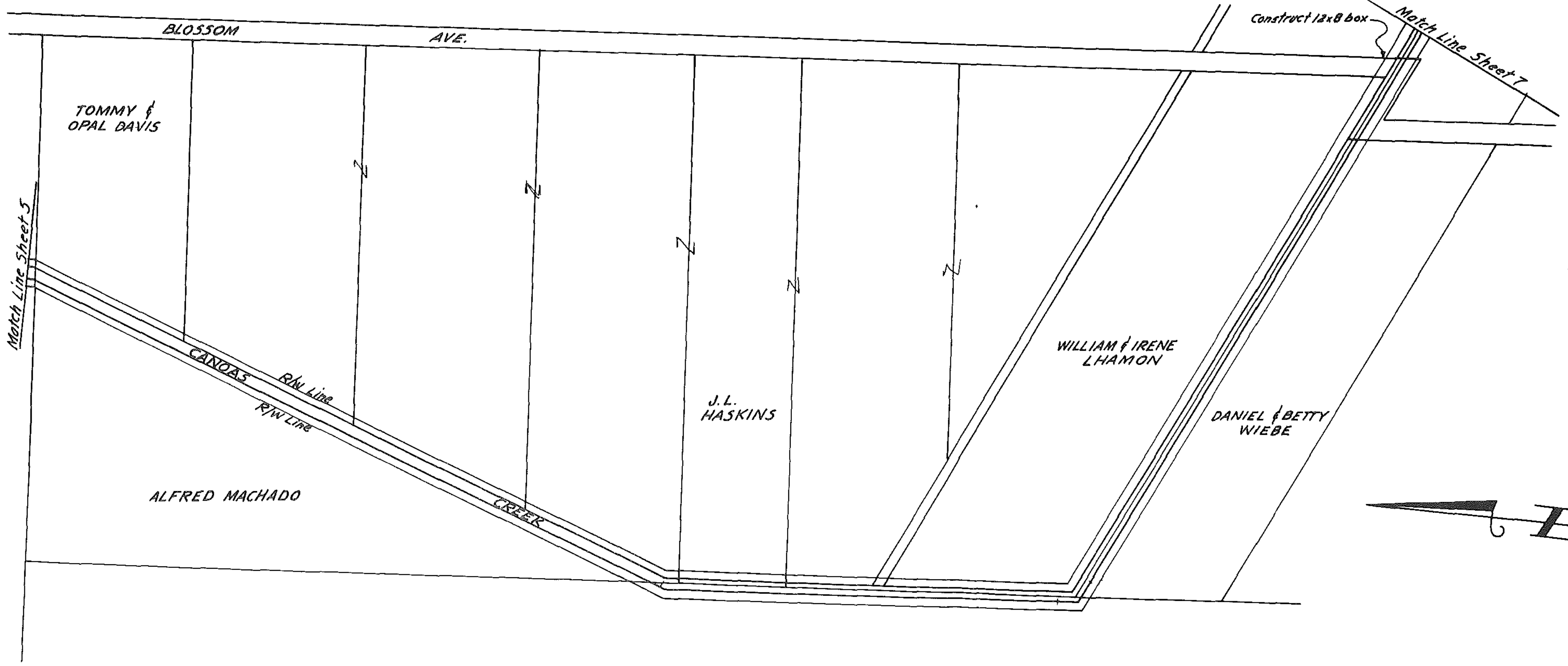
DESIGN R.S.S. C.B.
DRAWN R.J.F.
CHECKED C.B
DATE 9-30-60

SCALE: AS SHOWN
T.B. T-8,9,10
JOB NO. 1456
L.B. L-51,52
SHEET 5 OF 9
FILE NO.

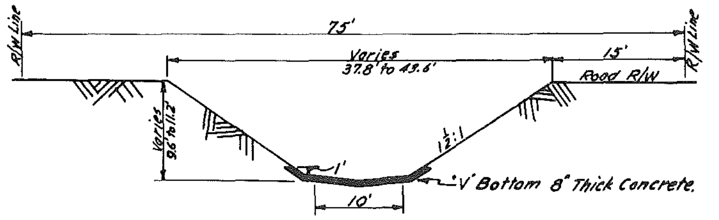
PLATE 33



PROFILE
Scale: Hor. 1"=200'
Ver. 1"=4'



PLAN
Scale: 1"=200'



TYPICAL SECTION
Between Snell Road and 5100'± South of Downer Avenue
SCALE: 1"=10'

ZONE C-1 (CENTRAL) PROJECT 7
CANOAS CREEK IMPROVEMENT
MAP AND GENERAL CONSTRUCTION PLANS

SANTA CLARA COUNTY FLOOD CONTROL
AND
WATER CONSERVATION DISTRICT

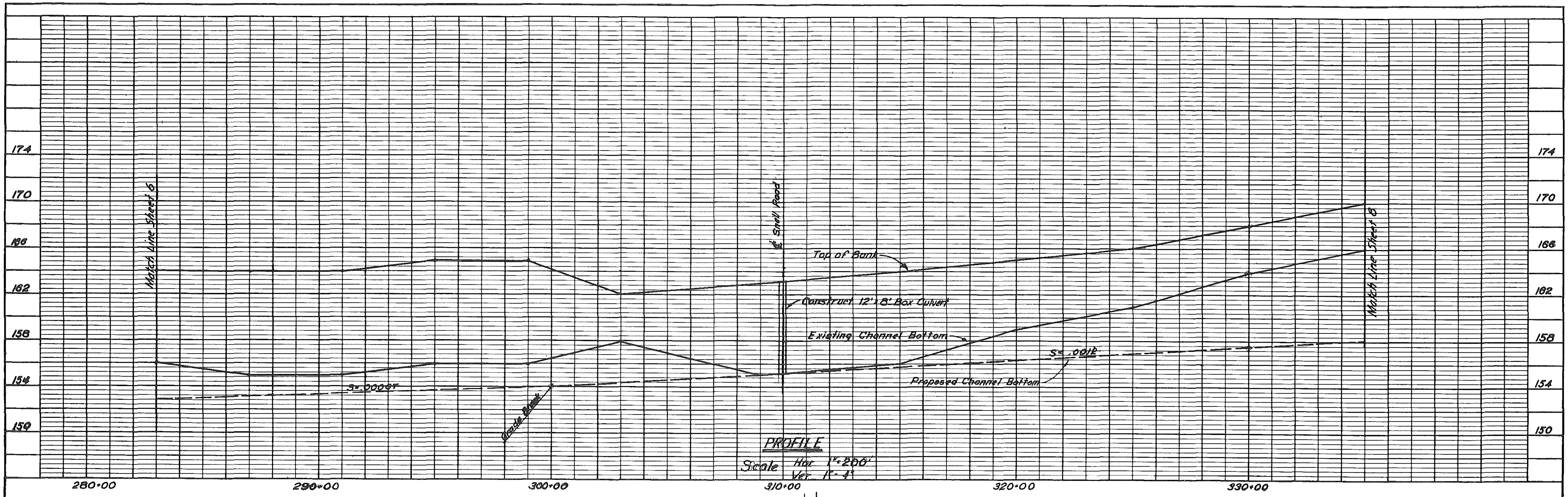
REV NO	APPROVED	DATE	CHANGE

ENGINEERING APPROVAL
George H. Prine
GEORGE H PRINE, SUPERVISING ENGINEER
APPROVED FOR DEPT. OF PUBLIC WORKS
James B. Enochs
JAMES B ENOCHS, DIRECTOR

DESIGN R.S.S. C.B
DRAWN R.J.F.
CHECKED C.B
DATE 9-30-60

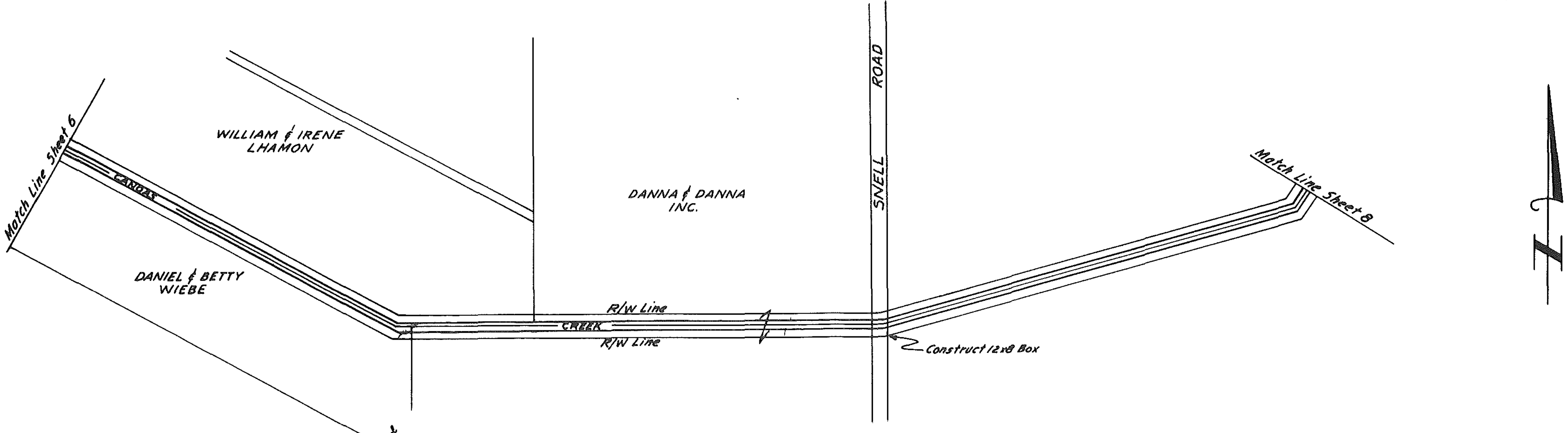
SCALE: AS SHOWN
T.B. T-8,9,10
JOB NO. 1456
L.B. L-51052
SHEET 6 OF 9
FILE NO.

PLATE 34



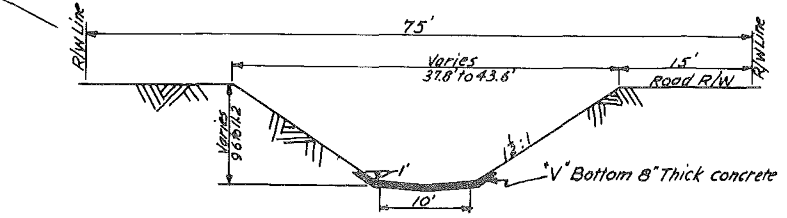
PROFILE

Scale Hor 1"=200'
Ver 1"=4'



PLAN

Scale: 1"=200'



TYPICAL SECTION

Between Snell Road and 5100'± South of Downer Avenue

SCALE: 1"=10'

JOB NO. 1458

ZONE C-1 (CENTRAL) PROJECT 7
CANOAS CREEK IMPROVEMENT
MAP AND GENERAL CONSTRUCTION PLANS

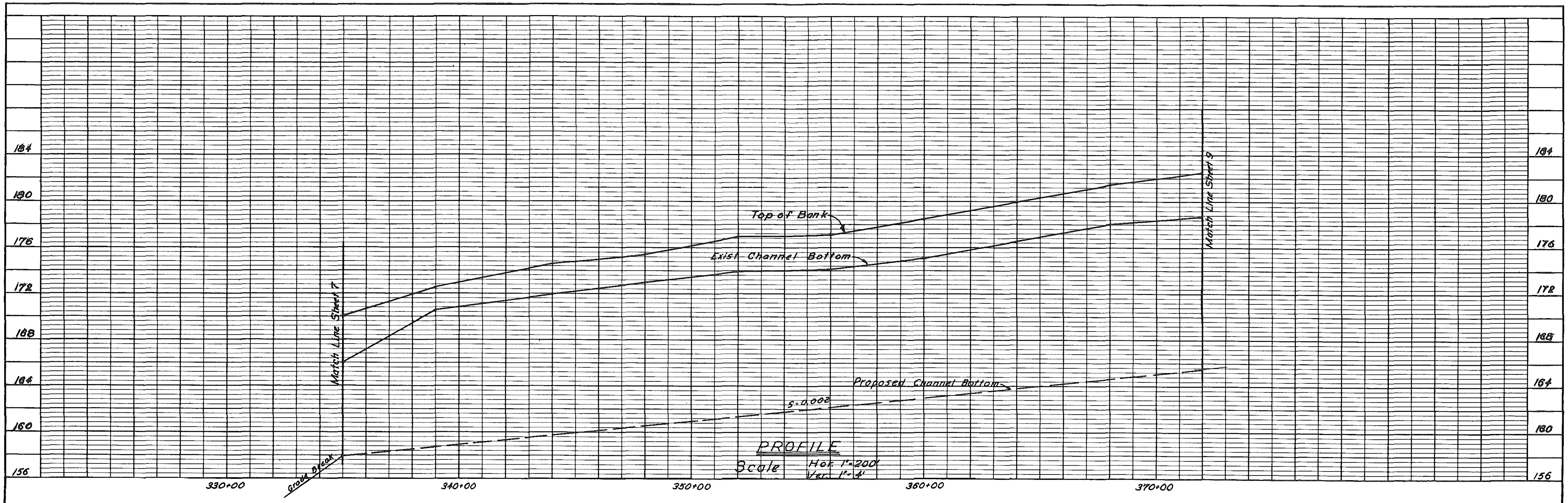
SANTA CLARA COUNTY FLOOD CONTROL
AND
WATER CONSERVATION DISTRICT

APPROVED FOR ENGINEERING
George H. Prune
GEORGE H PRUNE, SUPERVISING ENGINEER
APPROVED FOR DEPT. OF PUBLIC WORKS
James B Enochs
JAMES B ENOCHS DIRECTOR

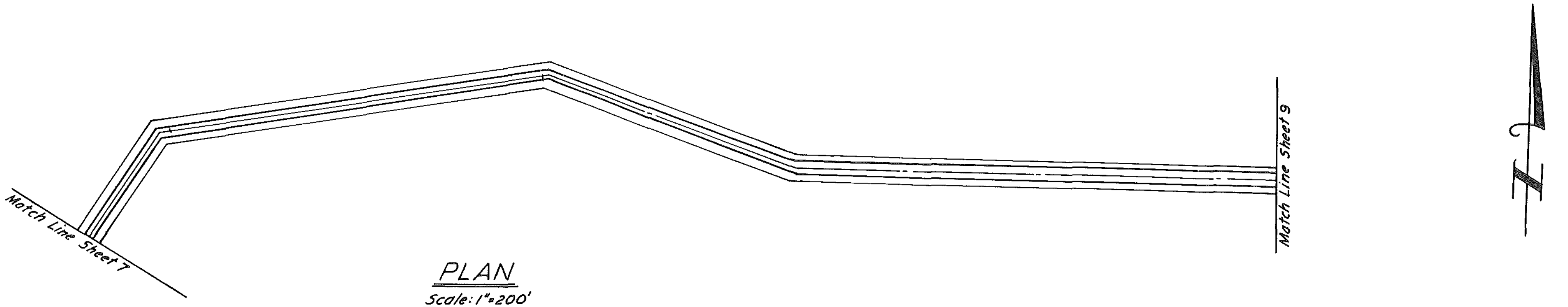
REV. NO.	APPROVED	DATE	CHANGE

DESIGN R.E.B. C.B.
DRAWN R.U.F.
CHECKED C.B.
DATE 9-30-60
SCALE AS SHOWN
T. B. T-8
L. B. 4-3
SHEET 7 OF 9
FILE NO.

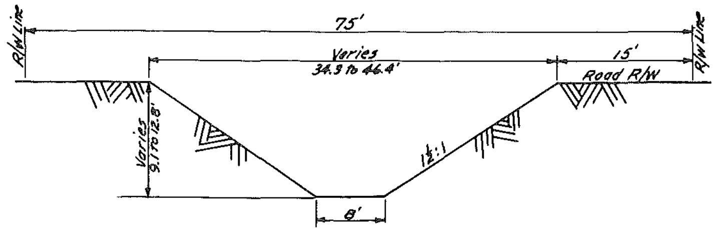
PLATE 35



PROFILE
Scale Hor. 1"=200'
Ver. 1"=4'



PLAN
Scale: 1"=200'



TYPICAL SECTION
Between Snell Road and End Project
SCALE: 1"=10'

REV NO	APPROVED	DATE	CHANGE

JOB NO. 1456

ZONE C-1 (CENTRAL) PROJECT 7
CANOAS CREEK IMPROVEMENT
MAP AND GENERAL CONSTRUCTION PLANS

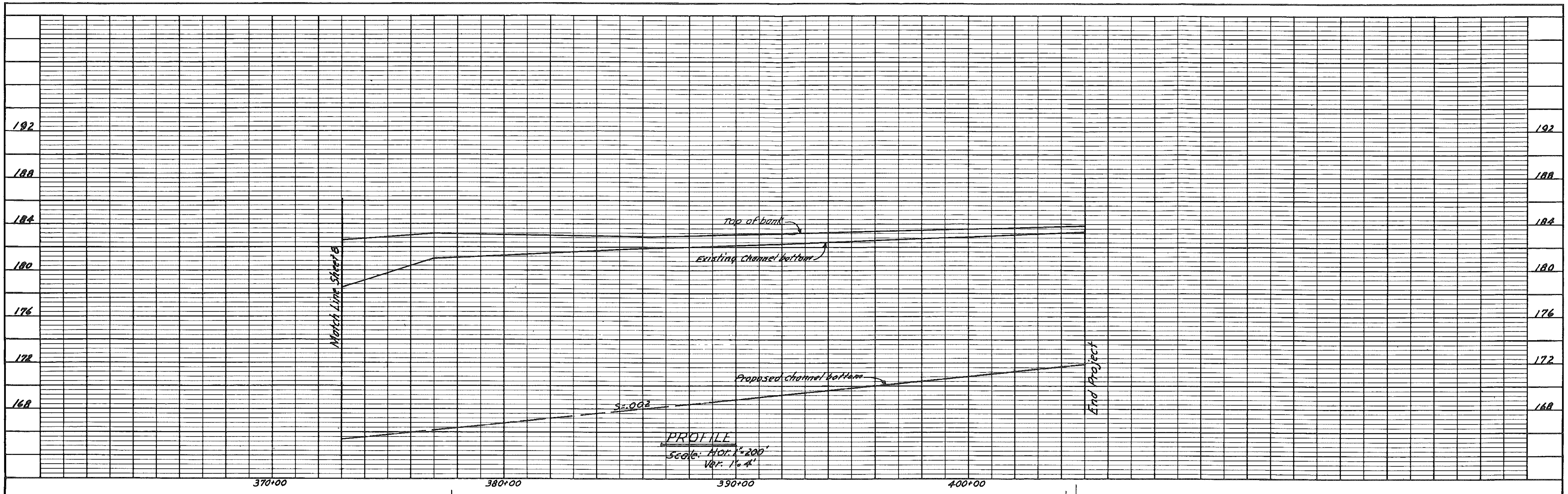
SANTA CLARA COUNTY FLOOD CONTROL
AND
WATER CONSERVATION DISTRICT

APPROVED FOR ENGINEERING
George H. Prune
GEORGE H. PRUNE, SUPERVISING ENGINEER
APPROVED FOR DEPT. OF PUBLIC WORKS
James B. Enochs
JAMES B. ENOCHS, DIRECTOR

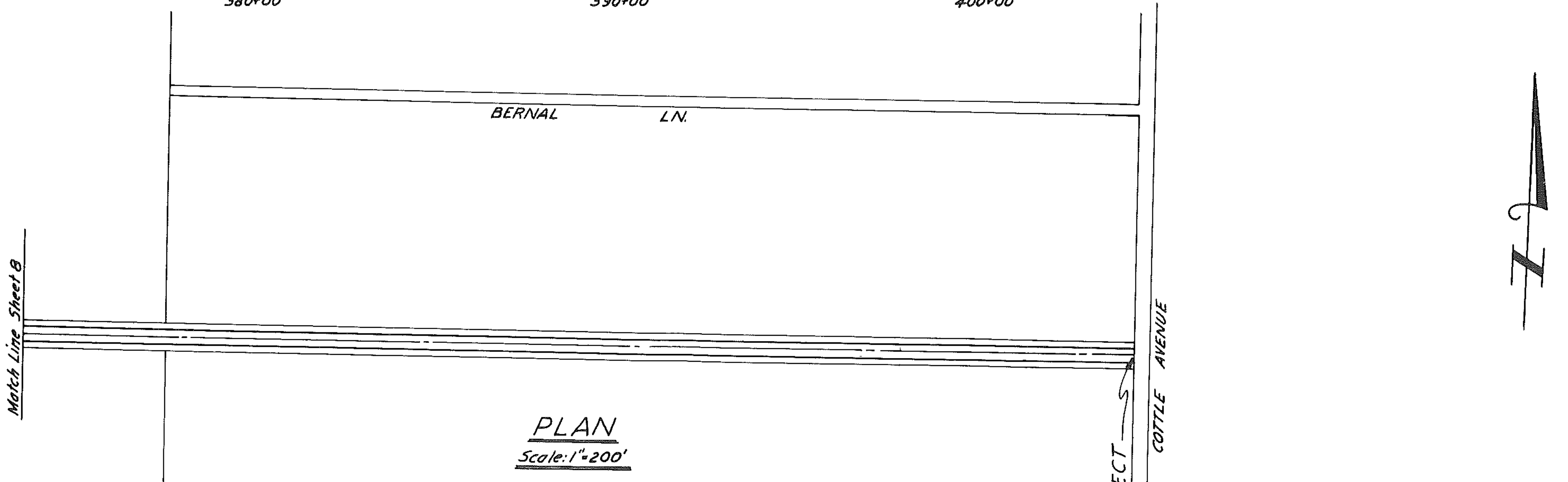
DESIGN R.S.S. C.B.
DRAWN R.J.F.
CHECKED C.B.
DATE 9-30-60

SCALE: AS SHOWN
T. B. T-99816
L. B. L-51058
SHEET 8 OF 9
FILE NO.

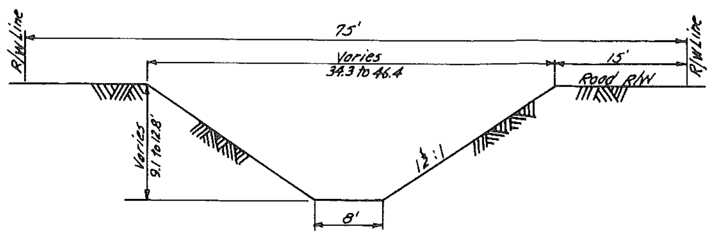
PLATE 36



PROFILE
Scale: Hor. 1"=200'
Ver. 1"=4'



PLAN
Scale: 1"=200'



TYPICAL SECTION
Between Snell Road and End Project
SCALE: 1"=10'

REV. NO.	APPROVED	DATE	CHANGE

JOB NO. 1456

ZONE C-I (CENTRAL) PROJECT 7
CANOAS CREEK IMPROVEMENT
MAP AND GENERAL CONSTRUCTION PLANS

SANTA CLARA COUNTY FLOOD CONTROL
AND
WATER CONSERVATION DISTRICT

APPROVED FOR ENGINEERING
George H. Prime
GEORGE H. PRIME, SUPERVISING ENGINEER
APPROVED FOR DEPT. OF PUBLIC WORKS
James B. Enochs
JAMES B. ENOCHS, DIRECTOR

DESIGN R.S.S. C.B.
DRAWN R.U.F.
CHECKED C.B.
DATE 9-30-60

SCALE: AS SHOWN
T. B. F-89/10
L. B. L-51-52
SHEET 9 OF 9
FILE NO.

PLATE 37